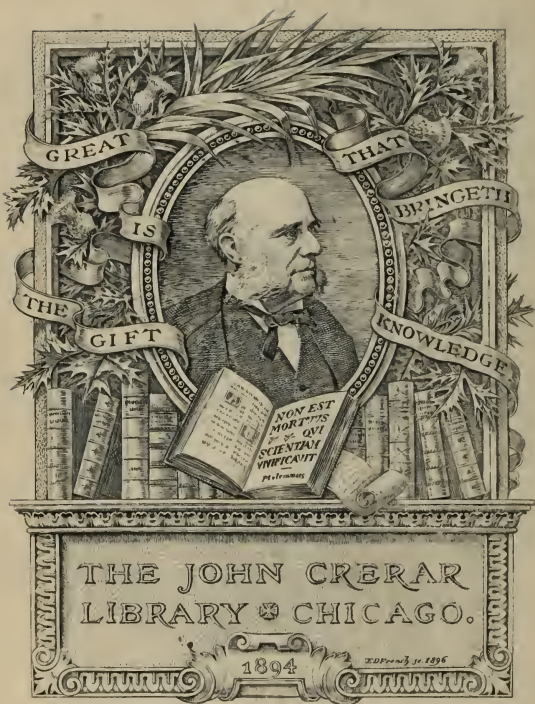




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Bucknell University Bulletin.

Published Bi-monthly by the Bucknell University,
Lewisburg, Pennsylvania.

FIFTEENTH SERIES

JANUARY, 1916

No. 4



CATALOG

1915-1916



~~Withdrawn~~

THE

SIXTY-SIXTH CATALOG

OF THE

OFFICERS AND STUDENTS

OF

Bucknell University:

COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1915-1916

GW

DEPARTMENTS

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CALENDAR.

The Winter Term Ends.....	Wednesday, March 22, 1916
The Spring Term Begins.....	Wednesday, March 29, 1916
Annual Commencement.....	Wednesday, June 21, 1916
The Fall Term Begins.....	Thursday, September 21, 1916
The Fall Term Ends.....	Wednesday, December 20, 1916
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BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one million dollars. The productive investment amounts to over eight hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIET BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE.

PATRONS are those who have given one thousand dol-

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lars or more, but less than ten thousand. (The names of Patrons will be published first in the Catalog for 1917, by which time a complete list may be made up.)

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalog of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees has authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the Loan Fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large, active loan fund accumulates.

(f) A fund for the Retirement of Professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever.

ORGANIZATION.

The University comprises four Schools:

I. THE COLLEGE offers nine Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence and Finance.
4. The Course in General Science.
5. The Course in Biology.
6. The Course in Chemical Engineering.
7. The Course in Civil Engineering.
8. The Course in Electrical Engineering.
9. The Course in Mechanical Engineering.

II. THE INSTITUTE embraces departments in Music, Vocal Expression, Art and Domestic Science.

III. THE ACADEMY is designed to fit young men or women for College, either for the Classical, Philosophical, Scientific, or Technological Courses.

IV. THE SCHOOL OF MUSIC has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

These schools are one corporation, have one President, who has general charge, with a Principal in more immediate charge of each of the subordinate departments. All expenses are met from funds in the hands of a common treasurer.

THE BOARD OF TRUSTEES.

CHAIRMAN, HARRY S. HOPPER, A.M.,
28 South Third Street, Philadelphia.

SECRETARY, A. JUDSON ROWLAND, D.D., LL.D.,
1701 Chestnut Street, Philadelphia.

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400 South Fortieth Street, Philadelphia.

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DAVID PORTER LEAS, A.M.	CHARLES S. WALTON, A.M.
HON. HAROLD M. MCCLURE, A.M.	JOSEPH K. WEAVER, A.M., M.D.

MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January in Philadelphia.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION.

A. JUDSON ROWLAND, D.D., LL.D., *Chairman.*

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LEROY STEPHENS, D.D. HON. ERNEST L. TUSTIN, LL.D.,
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COL. JOHN J. CARTER, A.M.

COMMITTEE ON PUBLICATION.

LEROY STEPHENS, D.D., *Chairman.*

DAVID PORTER LEAS, A.M. MILTON G. EVANS, D.D.
AND THE PRESIDENT.

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, Museum of Natural History and Recitation rooms.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Association, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College. In it the students of the College meet for worship.

V. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D. C. L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred and fifty thousand volumes.

VI. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half

feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteen wire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

VII. THE CHEMICAL LABORATORY.

The Laboratory is forty-three feet in width and eighty-six feet in length, with two stories above the basement. In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Organic Analysis; the basement has rooms for Applied Chemistry, and a fireproof room. The attic contains a room for dissection in Human Anatomy.

VIII. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the heating and lighting plant of the institution; the main story, with one room twenty by fifty and another forty by forty-five, is used for shop work. A separate building of brick is used for casting.

IX. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the room. At the height of twelve feet a running-track gallery, six feet wide, surrounds the room.

X. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XI. THE ACADEMY.

1. The Main Building of the Academy is situated on "College Hill," and is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Principal's office; on the second floor are suites of rooms for the Principal and his family and for the Matron. The third floor is used for a Laboratory of Biology.

2. The East Hall of the Academy is the Bucknell Cottage for young men, and is contiguous to the Main Building and connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet

in width, and is finished in natural wood. The building contains a general study room, a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

Both buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

XII. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College, in the Institute, and in the School of Music.

1. **The Main Building** contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, music rooms, recitation rooms, and a dining hall; on the second floor a school-room and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. **The South Hall**, erected in 1869, is devoted to students' rooms, except the third story, which is used as a Laboratory for the department of Domestic Science.

3. **The Bucknell Cottage** stands to the southwest of the Main Building, and is connected with it by an enclosed passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and

closets on either side. In this building is the **Studio**, a spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. New Cottage for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The **Calisthenium** occupies the upper story, and has a floor surface of over four thousand feet.

5. The Annex. An additional residence building has been secured which accommodates twenty College women.

All the buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

6. The Campus of the Women's College is separated from the main College grounds by Loomis Street.

XIII. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XIV. THE PRESIDENT'S HOUSE.

The Corporation also owns a house for the use of the President of the University.

THE COLLEGE.

THE FACULTY.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

FRANK ERNEST ROCKWOOD, LL.D.,
DEAN OF THE COLLEGE.

MISS ANNA ROBERTA CAREY, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN.

NELSON FITHIAN DAVIS, SC.D.,
DEAN OF THE SUMMER SCHOOL.

ENOCH PERRINE, LITT.D.,
SECRETARY OF THE FACULTY.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
LIBRARIAN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR OF THE UNIVERSITY.

FRANK EUGENE BURPEE, A.M.,
SUPERINTENDENT OF BUILDINGS AND GROUNDS.

* FREEMAN LOOMIS, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES AND LITERATURE.

WILLIAM CYRUS BARTOL, A.M., PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

FRANK ERNEST ROCKWOOD, A.M., LL.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE.

WILLIAM GUNDY OWENS, A.M.,
PROFESSOR OF CHEMISTRY.

ENOCH PERRINE, A.M., LITT.D.,
PROFESSOR OF THE ENGLISH LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D.,
NEW JERSEY PROFESSOR OF THE GREEK LANGUAGE AND LITERATURE.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
PROFESSOR OF LOGIC AND SOCIOLOGY.

NELSON FITHIAN DAVIS, SC.D.,
PROFESSOR OF BIOLOGY.

EPHRAIM M. HEIM, PH.D.,
PROFESSOR OF ECONOMIC AND POLITICAL SCIENCE.

GUIDO CARL LEO RIEMER, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES.

LLEWELLYN PHILLIPS, A.M., D.D.,
JOHN P. CROZER PROFESSOR OF RHETORIC AND ORATORY.

* THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY.

HENRY THOMAS COLESTOCK, A.M., PH.D.,
PROFESSOR OF HISTORY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND MECHANICAL DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FLOYD GEORGE BALLENTINE, PH.D.,
PROFESSOR OF LATIN.

* Deceased.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR OF MECHANICAL ENGINEERING.

MARTIN LINNAEUS DRUM, A.M.,
PROFESSOR OF SURVEYING.

NORMAN HAMILTON STEWART, A.B., SC.M.,
PROFESSOR OF BIOLOGY.

BENJAMIN W. GRIFFITH, A.M.,
PROFESSOR OF FRENCH.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

CHARLES CARPENTER FRIES, A.M.,
ASSISTANT PROFESSOR OF RHETORIC.

BROMLEY SMITH, A.M.,
INSTRUCTOR IN ORATORY AND RHETORIC.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

HARRY SCHEIDY EVERETT, A.M., SC.M.,
INSTRUCTOR IN MATHEMATICS.

ERNEST LAUNCELOT TAYLOR, A.M.,
INSTRUCTOR IN MATHEMATICS AND DRAWING.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
INSTRUCTOR IN CHEMISTRY.

HAROLD MURRAY McCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND NOTES AND ON AGENCY.

ADMISSION OF STUDENTS.

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

Three of these units are equal to one Carnegie unit.

I. GENERAL REQUIREMENTS.

Candidates for admission to any of the Courses must pass examination in the following:

1. ENGLISH (nine units).

- a.* Writing from dictation.
- b.* English Grammar.
- c.* Elements of Rhetoric—Invention, Style, and Punctuation.
- d.* A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. Reading.—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple

questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics; or Chemistry.

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*;
2. SOLID GEOMETRY (one unit).
3. Any eight units selected from group E.

C. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. SOLID GEOMETRY (one unit).
3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the Course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN OR FRENCH.

The Grammar of the Language, Composition and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates from Bucknell Academy, in any of the Courses, will be admitted to the corresponding Course in the College upon the Diploma of the Academy.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the College Entrance Examination Board are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work

during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismissal. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his deportment that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismission given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismission be granted to any student who has not discharged all his pecuniary obligations to the Institution. No papers of dismission or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismission are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers nine Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of which extends through two years of the Course and the latter through four years, and also twelve lecture courses.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three courses in German, French or Spanish.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four courses of German, French, or Spanish, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College courses in either of the Ancient Classical languages or nine College courses in English, German or French in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The Course in Jurisprudence is designed for persons preparing for the legal profession, for a business career, and for participation in public affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or

French for admission and at least four courses of college work in German, French or Spanish as requisites for graduation.

V. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VI. The Course in Chemical Engineering, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Science if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

VIII. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

IX. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

X. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master

of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

DOMESTIC SCIENCE.

The Course in Domestic science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To enter upon this Course, the student must have the usual four-year High School Course.

The Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- | | |
|--|-----------------------------|
| I. TERM—Solid Geometry,
Cicero de Senectute and Livy,
{ Odyssey,
{ Greek Prose Composition, | Rhetoric, I,
Oratory, I. |
| II. TERM—Higher Algebra,
Livy,
Lysias' Orations, | Rhetoric, I,
Oratory, I. |
| III. TERM—Trigonometry,
De Officiis,
Plato's Apology, | Rhetoric, I,
Oratory, I. |

SOPHOMORE YEAR.

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| I. TERM—English Literature,
Horace, | Astronomy, I, or
History of Art, I, |
| Oratory, I. | |

ELECTIVE STUDIES:

- | | |
|----------------|----------------------|
| German, | American History, a, |
| French, | Chemistry, |
| Spanish, | Surveying, |
| Greek History, | Analytical Geometry. |

II. TERM—Rhetoric,
Demosthenes,

Astronomy, I, or
History of Art, I,

Oratory, I.

ELECTIVE STUDIES:

Roman History,
American History, b,
Latin, c,
German,
French.

*Spanish,
Logic,
Chemistry,
Differential Calculus,
Advanced Algebra,*

Physiology.

III. TERM—Civics, or Economic History,

History of Art, I.

ELECTIVE STUDIES:

*Public Address,
Argumentation,
Juvenal,
German,
French,
Spanish.*

*Anthropology,
Botany,
Chemistry,
Integral Calculus,
Elements of Law,
Child Psychology.*

JUNIOR YEAR.

I. TERM { Psychology,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

Aeschylus and So
Latin, 8,
English, 6 or 7,
German,
French,
English Bible,
History, Oriental,
Economics,
Real Property,

*Sociology,
History of Education, a,
Teachers' Mathematics,
Physiological Psychology,
Biology,
Embryology,
Entomology,
Chemistry,
Mechanics,*

Geology.

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Comparative Psychology,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>German,</i>	<i>Animal Histology, a,</i>
<i>French,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English, a,</i>	<i>Higher Analytics,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Contracts,</i>	<i>Municipal Government,</i>
<i>History of Education, b.</i>	

III. TERM—Theism, II,	Religious Education, I,
History of Philosophy, III,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Constitutional Law,</i>
<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Psychology of Education,</i>	<i>Physics.</i>

SENIOR YEAR.

I. TERM	{ Social Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>School Administration,</i>
<i>Latin, 11,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Geology,</i>
<i>French,</i>	<i>Geodetic Astronomy,</i>
<i>Medieval History,</i>	<i>Personal Property,</i>
<i>Principles of Education,</i>	<i>Advanced Ethics.</i>

II. TERM	{ Political Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Philosophy of Mind,</i>
<i>Latin, 12,</i>	<i>History, 11,</i>
<i>Roman Life,</i>	<i>History of Europe, a,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Theories of Education,</i>	<i>Economic Geology,</i>
<i>Agency,</i>	<i>Human Anatomy, b.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phædo,</i>	<i>History of Europe, b,</i>
<i>Greek Testament,</i>	<i>Private Corporations,</i>
<i>Latin, 13,</i>	<i>Roman Law,</i>
<i>German,</i>	<i>Bills and Notes,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Shakspeare,</i>	<i>Forestry,</i>
<i>History of Philosophy,</i>	<i>Railroad Transportation,</i>
<i>Secondary Education,</i>	<i>Advanced Composition.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
Cicero de Senectute and Livy, Oratory, I.
German or French or Spanish,

- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
German or French or Spanish,

- III. TERM—De Officiis, Rhetoric, I,
 Analytical Geometry Oratory, I.
 or Astronomy,
German or French or Spanish,

SOPHOMORE YEAR.

- I. TERM—English Literature, Astronomy, I, or
 Horace, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

- German,* *American History, a,*
French, *Chemistry,*
Greek History, *Surveying.*

- II. TERM—Rhetoric, Astronomy, I, or
 Oratory, I, History of Art, I.

ELECTIVE STUDIES:

- Roman History,* *Physiology,*
American History, b, *Chemistry,*
Latin, 6, *Differential Calculus,*
German, *Advanced Algebra,*
French, *Logic.*

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

- Argumentation,* *Anthropology,*
Public Address, *Elementary Law,*
Juvenal, *Botany,*
German, *Chemistry,*
French, *Integral Calculus,*
Child Psychology.

JUNIOR YEAR.

I. TERM	{ Psychology, Thesis,	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>Latin, 8,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Entomology,</i>
<i>English, 6 or 7,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>Sociology,</i>	<i>History of Education, a,</i>
<i>Teachers' Mathematics.</i>	

II. TERM	{ Ethics, Thesis,	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Advanced Logic,</i>
<i>English, 8,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Contracts,</i>	<i>History of Education, b,</i>

III. TERM—	Theism, II,	Religious Education, I,
	History of Philosophy, III,	Thesis.

ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Histology, b,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Constitutional Law,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 11,</i>	<i>Principles of Education,</i>
<i>German,</i>	<i>School Administration,</i>
<i>French,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Personal Property,</i>
<i>English, 4 or 9,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Advanced Ethics,</i>	<i>Geology,</i>
<i>Geodetic Astronomy.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 12,</i>	<i>Roman Private Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Philosophy of Mind,</i>	<i>Human Anatomy, b,</i>
<i>Theories of Education,</i>	<i>Agency.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Latin, 13,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Secondary Education,</i>
<i>French,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>History of Europe, b,</i>	<i>Forestry,</i>
<i>Bills and Notes,</i>	<i>Railroad Transportation,</i>
<i>Advanced Composition.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

I. TERM—Higher Algebra, Rhetoric, I,
 Odyssey, Oratory, I.
German or French or Spanish,

II. TERM—Trigonometry, Rhetoric, I,
 Lysias' Orations, Oratory, I.
German or French or Spanish,

III. TERM—Analytical Geometry Rhetoric, I,
 or Astronomy, Oratory, I.
 Plato's Apology,
German or French or Spanish,

SOPHOMORE YEAR.

I. TERM—English Literature, Astronomy, I, or
 Greek History, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

*American History, a, French,
 German, Chemistry,
 Surveying.*

II. TERM—Rhetoric, Astronomy, I, or
 Demosthenes, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

*German, Logic,
 French, Physiology,
 Roman History, Chemistry,
 American History, b, Differential Calculus,
 Advanced Algebra.*

III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

<i>Argumentation,</i>	<i>Elements of Law,</i>
<i>Public Address,</i>	<i>Botany,</i>
<i>German,</i>	<i>Anthropology,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Integral Calculus,</i>	<i>Child Psychology.</i>

JUNIOR YEAR.

I. TERM	{ Psychology,	Sanitary Science, I.
	{ Thesis,	

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>History of Education, a,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English Bible,</i>	<i>Biology,</i>
<i>English, 6 or 7,</i>	<i>Entomology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Sociology,</i>	<i>Mechanics,</i>
<i>Teachers' Mathematics.</i>	

II. TERM	{ Ethics,	Sanitary Science, I.
	{ Thesis,	

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>History of Education, b,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English, 8,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English,</i>	<i>Chemistry,</i>
<i>Money and Banking,</i>	<i>Mathematics, 9,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Advanced Logic,</i>	<i>Higher Analytics,</i>
<i>Municipal Sociology,</i>	<i>Contracts.</i>

III. TERM—	Theism, II,	Religious Education, I,
	History of Philosophy, III,	Thesis.

ELECTIVE STUDIES:

<i>Greek</i> , 8,	<i>Cryptogamic Botany</i> ,
<i>Journalism</i> ,	<i>Bacteriology</i> ,
<i>German</i> ,	<i>Histology</i> , 6,
<i>French</i> ,	<i>Chemistry</i> ,
<i>English Bible</i> ,	<i>Astronomy</i> ,
<i>Partnership</i> ,	<i>Physics</i> ,
<i>Zoölogy of Vertebrates</i> ,	<i>Constitutional Law</i> ,
<i>Psychology of Education</i> .	

SENIOR YEAR.

I. TERM { *Social Ethics*, I,
 Thesis.

ELECTIVE STUDIES:

<i>Greek Testament</i> ,	<i>Principles of Education</i> ,
<i>Anglo-Saxon</i> ,	<i>School Administration</i> ,
<i>English</i> , 4 or 9,	<i>International Law</i> ,
<i>German</i> ,	<i>Personal Property</i> ,
<i>French</i> ,	<i>Comparative Anatomy</i> ,
<i>Medieval History</i> ,	<i>Chemistry</i> ,
<i>Advanced Ethics</i> ,	<i>Geology</i> .

II. TERM { *Political Ethics*, I,
 Thesis.

ELECTIVE STUDIES:

<i>Greek Testament</i> ,	<i>Theories of Education</i> ,
<i>Chaucer</i> ,	<i>Roman Life</i> ,
<i>German</i> ,	<i>Comparative Politics</i> ,
<i>French</i> ,	<i>Public Finance</i> ,
<i>Philosophy of Mind</i> ,	<i>Chemistry</i> ,
<i>History of Europe</i> , a,	<i>Economic Geology</i> ,
<i>Agency</i> ,	<i>Human Anatomy</i> , b.

III. TERM—*Literature*, I, or
 Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Secondary Education,</i>
<i>Greek Testament,</i>	<i>Bills and Notes,</i>
<i>French,</i>	<i>History of Europe, b,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
<i>Advanced Composition.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
 { Odyssey,
 { Greek Prose Composition,
 or German,
 or French,
 or Spanish,
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I,
 Lysias' Orations,
 or German, or French,
 or Spanish,
- III. TERM—Civics, Rhetoric, I,
 De Officiis, Oratory, I.
 Plato's Apology,
 or German,
 or French,
 or Spanish,

SOPHOMORE YEAR.

- | | |
|-----------------------------|-----------------------|
| I. TERM—English Literature, | Political Science, I, |
| Horace, | Oratory, I. |

ELECTIVE STUDIES:

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|-----------------------------|-------------------|
| <i>Greek History,</i> | <i>Surveying,</i> |
| <i>American History, a,</i> | <i>Chemistry.</i> |
| <i>French,</i> | |
| <i>German,</i> | |

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| II. TERM—Rhetoric, | Political Science, I, |
| Logic, | Oratory, I. |

ELECTIVE STUDIES:

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|-----------------------|-----------------------------|
| <i>Demosthenes,</i> | <i>American History, b,</i> |
| <i>Quintilian,</i> | <i>German,</i> |
| <i>Roman History,</i> | <i>French.</i> |

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|------------------------------|-----------------------|
| III. TERM—Elements of Law, | Political Science, I. |
| American Constitutional Law, | |

ELECTIVE STUDIES:

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|--------------------------|-----------------------------|
| <i>Juvenal,</i> | <i>American Literature,</i> |
| <i>German,</i> | <i>Argumentation,</i> |
| <i>French,</i> | <i>Public Address,</i> |
| <i>Economic History,</i> | <i>Child Psychology.</i> |

JUNIOR YEAR.

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|---------------------|----------------|
| I. TERM—Psychology, | Blackstone, I, |
| Economics, | Thesis. |

ELECTIVE STUDIES:

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|---|----------------------------|
| <i>Real Property, Blackstone B. II,</i> | <i>English Bible,</i> |
| <i>Constitutional Limitations,</i> | <i>Latin, 8,</i> |
| <i>English History,</i> | <i>Greek Tragedy,</i> |
| <i>Sociology,</i> | <i>English Literature,</i> |
| <i>History of Education, a,</i> | <i>Modern Language.</i> |

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| II. TERM—Ethics, | Blackstone, I, |
| Money and Banking, | Thesis. |

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Modern Language,</i>	<i>History of Education, b.</i>

III. TERM—Theism, II,	Blackstone, I,
Philosophy, III,	Thesis.
Private Corporations,	

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM—International Law,	{ Social Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Personal Property,</i>	<i>Latin, 11,</i>
<i>Medieval History,</i>	<i>Modern Language,</i>
<i>Anglo-Saxon,</i>	<i>Advanced Ethics,</i>
<i>English Literature,</i>	<i>Principles of Education.</i>

II. TERM—Comparative Politics,	{ Political Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Agency,</i>	<i>Demosthenes de Corona,</i>
<i>Public Finance,</i>	<i>Latin, 12,</i>
<i>Modern Europe, a,</i>	<i>Chaucer,</i>
<i>Philosophy of Mind,</i>	<i>Modern Language,</i>
<i>Theories of Education.</i>	

III. TERM—Roman Law,	Literature, I.
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ELECTIVE STUDIES:

<i>Bills and Notes,</i>	<i>Shakspeare,</i>
<i>Railroad Transportation,</i>	<i>Plato's Phaedo,</i>
<i>Modern Europe, b,</i>	<i>Latin, 13,</i>
<i>History, 9,</i>	<i>Modern Language,</i>
<i>History of Philosophy,</i>	<i>Secondary Education,</i>
<i>Advanced Composition, a.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

IV. THE GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

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|---|-----------------------------|
| I. TERM—Higher Algebra,
Latin,
German, 2, or French,
or Spanish, | Rhetoric, I,
Oratory, I. |
| II. TERM—Trigonometry,
Latin,
German, 3, or French,
or Spanish,
Latin, | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry,
or Astronomy,
German, 4, or French,
or Spanish, | Rhetoric, I,
Oratory, I. |

SOPHOMORE YEAR.

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| I. TERM—English Literature, | Astronomy, I, or
History of Art, I. |
| Oratory, I. | |

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Greek History,</i>
<i>Horace,</i>	<i>American History, a,</i>
<i>German,</i>	<i>Surveying,</i>
	<i>French.</i>

II. TERM—Rhetoric,	Astronomy, I, or
	History of Art, I,
Oratory, I.	

ELECTIVE STUDIES:

<i>German,</i>	<i>Logic,</i>
<i>French,</i>	<i>Physiology,</i>
<i>Roman History,</i>	<i>Chemistry,</i>
<i>American History, b,</i>	<i>Differential Calculus,</i>
<i>Advanced Algebra.</i>	

III. TERM—Civics or Economic History,	History of Art, I.
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ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Elements of Law,</i>
<i>Argumentation,</i>	<i>Anthropology,</i>
<i>Juvenal,</i>	<i>Botany,</i>
<i>German,</i>	<i>Integral Calculus,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Child Psychology.</i>	

JUNIOR YEAR.

I. TERM {	Psychology,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Entomology,</i>
<i>Sociology,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>History of Education, a,</i>	<i>Teachers' Mathematics,</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English</i> , 8,	<i>Contracts</i> ,
<i>German</i> ,	<i>Comparative Psychology</i> ,
<i>French</i> ,	<i>Zoölogy of Invertebrates</i> ,
<i>English Bible</i> ,	<i>Animal Histology</i> , a,
<i>History, English</i> ,	<i>Human Anatomy</i> , a,
<i>Money and Banking</i> ,	<i>Chemistry</i> ,
<i>Municipal Government</i> ,	<i>Mathematics</i> , 9,
<i>Municipal Sociology</i> ,	<i>Higher Analytics</i> ,
<i>History of Education</i> , b,	<i>Physics</i> .

III. TERM— <i>Theism</i> , II,	<i>Religious Education</i> , I,
<i>History of Philosophy</i> , III,	<i>Thesis</i> .

ELECTIVE STUDIES:

<i>Greek</i> , 8,	<i>Zoölogy of Vertebrates</i> ,
<i>Journalism</i> ,	<i>Bacteriology</i> ,
<i>German</i> ,	<i>Histology</i> , b,
<i>French</i> ,	<i>Astronomy</i> ,
<i>English Bible</i> ,	<i>Physics</i> ,
<i>Partnership</i> ,	<i>Chemistry</i> ,
<i>Cryptogamic Botany</i> ,	<i>Constitutional Law</i> ,
<i>Psychology of Education</i> .	

SENIOR YEAR.

I. TERM	{ <i>Social Ethics</i> , I,
	{ <i>Thesis</i> .

ELECTIVE STUDIES:

<i>Anglo-Saxon</i> ,	<i>Principles of Education</i> ,
<i>English</i> , 4 or 9,	<i>Advanced Ethics</i> ,
<i>German</i> ,	<i>International Law</i> ,
<i>French</i> ,	<i>Comparative Anatomy</i> ,
<i>Medieval History</i> ,	<i>Chemistry</i> ,
<i>Personal Property</i> ,	<i>Geology</i> ,
<i>Geodetic Astronomy</i> .	

II. TERM	{ <i>Political Ethics</i> , I,
	{ <i>Thesis</i> .

ELECTIVE STUDIES:

<i>German,</i>	<i>Theories of Education,</i>
<i>French,</i>	<i>Roman Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>Philosophy of Mind,</i>	<i>Public Finance,</i>
<i>Modern Europe, a,</i>	<i>Chemistry,</i>
<i>History, 11,</i>	<i>Economic Geology,</i>
	<i>Agency.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>School Administration,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
	<i>Advanced Composition, a.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

V. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

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| I. TERM—Algebra, | Rhetoric, I, |
| General Chemistry, | Oratory, I. |
| Latin, or German, 2, | |
| or French, or Spanish, | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| General Chemistry, | Oratory, I. |
| German, 3, | |
| or French, or Spanish, | |
| III. TERM—Analytical Geometry, | Rhetoric, I, |
| Qualitative Chemistry, | Oratory, I. |
| German, 4, or French, | |
| or Spanish, | |

SOPHOMORE YEAR.

I. TERM—Rhetoric, Biology, Quantitative Chemistry,	Drawing, I, Scientific German, II.
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II. TERM—Invertebrate Zoölogy, Physiology,	Drawing, I, Scientific German, II.
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ELECTIVE STUDIES:

<i>History,</i>	<i>English Literature,</i>
<i>Modern Language,</i>	<i>Chemistry,</i>
<i>Differential Calculus.</i>	

III. TERM—Vertebrate Zoölogy, Botany,	Drawing, I, Scientific German, II.
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ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Civics,</i>
<i>Anthropology,</i>	<i>English Literature,</i>
<i>Integral Calculus,</i>	<i>Modern Language,</i>
<i>Economic History,</i>	<i>Child Psychology.</i>

JUNIOR YEAR.

I. TERM—Psychology, Mechanics, <i>Entomology,</i> <i>Physiological Psychology,</i> <i>Organic Chemistry,</i>	German Biology, I, Thesis.
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II. TERM—Comparative Psychology, Physics,	German Biology, I, Thesis.
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ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Organic Chemistry,</i>	<i>Human Anatomy, a.</i>

III. TERM—Neurology, Physics,	German Biology, I, Thesis.
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ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language.</i>

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| II. TERM—Chemistry,
Trigonometry,
<i>German, 3, or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Drawing, IV. |
| III. TERM—Chemistry,
Analytical Geometry,
<i>German, 4, or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | Shopwork, II. |

JUNIOR YEAR.

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| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | German Chemistry, I,
Chemical Thesis. |
| III. TERM—Organic Chemistry,
Spectrum Analysis,
<i>Agricultural Chemistry, 2 or</i>
<i>Boilers and Engines,</i> | German Chemistry, I,
Chemical Thesis. |

SENIOR YEAR.

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| I. TERM—Physical Chemistry,
{ Chemical Preparations,
{ Industrial Chemistry,
Geology, | { Social Ethics, I,
{ Thesis. |
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- II. TERM—Physical Chemistry, { Political Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
Direct Current Machinery, or
Hydraulic Motors, or
Economic Geology,

- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
Alternating Current Machinery,
or Water Supply and Sanitary Engineering, or Surveying, or Advanced Composition, b,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

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| I. TERM—Higher Algebra,
Drawing,
<i>German, 3, or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Oratory, I. |
| II. TERM—Trigonometry,
Drawing,
<i>German, 3, or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i>
<i>or Spanish,</i> | Rhetoric, I.
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric,
Surveying,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Descriptive Geometry,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |

JUNIOR YEAR.

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| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
{ Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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|---|-------------------------------------|
| I. TERM—Bridges and Buildings,
Geodetic Astronomy,
<i>Geology</i> or
<i>Theoretical Mechanics</i> or
<i>Electrical Measurements</i> , | { Social Ethics, I,
{ Thesis. |
| II. TERM—Hydraulic Motors,
Bridges and Buildings,
<i>Economic Geology</i> or
<i>Advanced Physics</i> or
<i>Direct Current Machinery</i> , | { Political Ethics, I,
{ Thesis. |

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| III. TERM—Bridges and Buildings, | Contracts and Specifications, I. |
| { Mine Surveying, | |
| { City Surveying, | |
| <i>Railroad Transportation or</i> | |
| <i>Advanced Physics or</i> | |
| <i>Alternating Current Machinery</i> | |
| <i>or Forestry, or Advanced Com-</i> | |
| <i>position, b,</i> | |
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VIII. THE COURSE IN ELECTRICAL ENGINEERING.

Leading to the First Degree in Electrical Engineering.

FRESHMAN YEAR.

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| I. TERM—Higher Algebra, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 2, or French,</i> | |
| <i>or Spanish,</i> | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 3, or French,</i> | |
| <i>or Spanish,</i> | |
| III. TERM—Analytical Geometry, | Rhetoric, I, |
| Drawing, | Shopwork, IV. |
| <i>German, 4, or French,</i> | |
| <i>or Spanish,</i> | |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric, | Shopwork, IV. |
| Mechanics, | |
| Chemistry, | |
| II. TERM—Differential Calculus, | Shopwork, IV. |
| Physics, | |
| Chemistry, | |

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| III. TERM—Integral Calculus,
Physics,
Chemistry, | Shopwork, II. |
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JUNIOR YEAR.

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| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry</i> , or
<i>Theoretical Mechanics</i> , | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |
| III. TERM—Alternating Current Machinery,
Advanced Physics,
Boilers and Engines, | Machine Design
and Tools, I,
Thesis. |

SENIOR YEAR.

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| I. TERM—Design of Electrical Machinery,
Electrical Generating Stations and Transmission,
Graphical Analysis of Structures, | { Social Ethics, I,
Thesis. |
| II. TERM—Design of Electrical Machinery,
Telegraphs, Telephones,
Signaling Apparatus,
Hydraulic Motors. | { Political Ethics, I,
Thesis. |
| III. TERM—Electric Lighting,
Electric Railways,
<i>Water Supply and Sanitary Engineering</i> , or <i>Surveying</i> ,
or <i>Advanced Composition</i> , b, | Contracts and Specifications, I. |

IX. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

- I. TERM—Advanced Algebra, Rhetoric, I,
Drawing, Shopwork, II.
German, 2, or French,
or Spanish,
- II. TERM—Trigonometry, Rhetoric, I,
Drawing, Shopwork, II.
German, 3, or French,
or Spanish,
- III. TERM—Analytical Geometry, Rhetoric, I,
Drawing, Shopwork, IV.
German, 4, or French,
or Spanish,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Shopwork, IV.
Mechanics,
Chemistry,
- II. TERM—Differential Calculus, Shopwork, IV.
Physics,
Chemistry,
- III. TERM—Integral Calculus, Shopwork, IV.
Physics,
Chemistry,

JUNIOR YEAR.

- I. TERM—Electrical Measurements, Shopwork, IV,
Descriptive Geometry, Machine Design, I.
Strength of Materials,

II. TERM—Direct Current Machinery, Shopwork, IV,
Thermo-Dynamics, Machine Design, I,
Metallurgy,

III. TERM—Alternating Current Machinery, Shopwork, IV,
Thermo-Dynamics, Machine Design, I,
Boilers and Engines,

SENIOR YEAR.

I. TERM—Steam Engineering (49), { Social Ethics, I,
Design of Electrical Ma- { Thesis,
chinery, Automobiles, IV.
Bridges and Buildings,

II. TERM—Steam Engineering (50), { Political Ethics, I,
Design of Electrical Ma- { Thesis,
chinery, Heating and
Hydraulic Motors, Ventilation, IV.

III. TERM—Steam Engineering (51), Contracts, I,
Electric Lighting, Refrigeration, IV,
*Water Supply and Sanitary
Engineering, or Surveying, or
Advanced Composition, b,*

X. THE COURSE IN DOMESTIC SCIENCE.

FIRST YEAR.

I. TERM—Chemistry, 5, Thesis,
General Psychology, 5, Physical Training, 2,
Cookery { Principles, 1, Sewing, 2.
 { Practice, 5,

II. TERM—Chemistry, 5, Thesis,
Personal Hygiene, 5, Physical Training, 2,
Cookery { Principles, 1, Mechanical Drawing, 1,
 { Practice, 5, Sewing, 2.

III. TERM—Chemistry, 5,	Thesis,
Home Nursing and Emer-	Physical Training, 2,
gencies, 5,	Domestic Architecture, 1,
Cookery { Principles, 1,	Sewing, 2.
Practice, 4,	

SECOND YEAR.

I. TERM—Chemistry of Foods, 5,	Thesis,
Biology, 5,	Physical Training, 2,
Cookery { Principles, 1,	Methods of Teaching Do-
Practice, 4,	mestic Science, 1.
French, 5,	
II. TERM—French, 5,	Thesis,
Cookery, 5,	Physical Training, 2,
Dietetics and Domestic Sani-	Invalid Cookery, 1,
tation, 5,	Methods of Teaching, 1.
III. TERM—Cookery, 5,	Thesis,
Bacteriology, 5,	Methods of Teaching, 1,
Child Psychology, 5,	Household Manage-
	ment, 2.

Certificates of graduation are granted to students who complete the Domestic Science Course.

DEPARTMENTS OF INSTRUCTION.

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented analytically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D.,

PROFESSOR OF PSYCHOLOGY AND ETHICS.

THOMAS ALPHEUS EDWARDS, A.M.,

PROFESSOR OF PEDAGOGY.

The studies in this department embrace Psychology, Philosophy, Ethics, Theism, and Pedagogy.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Lotze, Grundzüge der Psychologie.** Seniors and Juniors. Minor. One hour.

4. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

5. **History of Philosophy.** Text-book and Lectures. Required of Juniors. Third term, three hours.

6. **Philosophy of Religion.** Required of Juniors. Third term, two hours.

7. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

8. **Roman Philosophy** (Latin 8). Elective to Seniors and Juniors.—PROFESSOR ROCKWOOD.

9. **Philosophy.** Jerusalem. Third term, five hours.

10. **Ethics.** Required of Juniors. Second term, five hours.

11. **Social Ethics—Domestic Relations.** Lectures. Required of Seniors. First term, one hour.

12. **Political Ethics—Duties of Citizenship.** Lectures. Required of Seniors. Second term, one hour.

13. **Ethics of Plato and Aristotle.** Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

EDUCATION.

1. **History of Education, a. Ancient and Medieval.** Seniors and Juniors. First term, five hours.

2. **History of Education, b. Modern.** Seniors and Juniors. Second term, five hours.

3. **Principles of Education.** Seniors and Juniors. First term, five hours.

4. **Educational Theories.** Seniors and Juniors. Second term, five hours.

5. **Psychology of Education.** Seniors and Juniors. Third term, five hours.

6. **Comparative Psychology.** Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

7. **Child Psychology.** With special reference to teaching. Sophomores. Third term, five hours.—MISS CAREY.

8. **Secondary Education.** Administration and Methods. Seniors and Juniors. Third term, five hours.

9. **Religious Education.** Lectures. Second term, one hour. Juniors. Third term, one hour. Seniors and Juniors.

10. **Teachers' Course in Latin.** Special topics in grammar, with practical exercises in Cæsar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **Teachers' Course in English.** Designed to familiarize the student with the authors required for entrance to college.—PROFESSOR PERRINE.

12. **Teachers' Course in Mathematics.** Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools; reforms in arithmetical teaching. (b) Algebra: Its growth during the last three centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry. Seniors and Juniors. First term.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Principles of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

II. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT.
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND AGENCY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History* and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B. I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—JUDGE JOHNSON.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—JUDGE JOHNSON.

5. **Contracts.** Text-book, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-book, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—JUDGE MCCLURE.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** Third term, Seniors and Juniors.—PROFESSOR HAMBLIN.

13. **Constitutional Limitations.** Cooley's Constitutional Limitations and Cases.—PROFESSOR HEIM.

14. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

15. **Moot courts** are held in which an attorney-at-law and a student sit as judges, and students, deputed to represent the respective sides, present their arguments. The presiding student writes the opinion of the court.

III. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. **Corporate Finance and Commercial Law.** Organization and Management of Corporations. Corporation Finance. Form and Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups

of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. Transportation and Commerce. Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. Economics. Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. American Civics. A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. American Constitutional Law. Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.—PROFESSOR HAMBLIN.

10. Constitutional Limitations. The Constitutional Law of the American Commonwealth. The sphere of Civil Rights in relation of the exercise of governmental power through the criminal law, the police power, the taxing power, and the power of eminent domain.

11. Comparative Politics. A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

12. Municipal Government. Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

13. International Law. First term, five hours. Seniors and Juniors.

14. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one

hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

15. Political Science. Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

16. American Diplomacy. Minor Course, two hours.

IV. DEPARTMENT OF SOCIOLOGY AND LOGIC.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. Anthropology, Descriptive and Physical. Elective to Sophomores. Third term, five hours.

2. Sociology, Principles and Theory. Elective to Seniors and Juniors. First term, five hours.

3. Charities and Reform. Seniors and Juniors. Second term, one hour. Prerequisite, Course 2.

4. Municipal Sociology. Seniors and Juniors. Second term, five hours.

5. History of Art. Lectures. Sophomores. Three terms, one hour. I. Painting; II. Sculpture; III. Architecture.

6. Logic, Deductive and Inductive. Second term, five hours.

7. Scientific Method, with Exercises in Analysis. Seniors and Juniors. Second term, five hours.

V. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. Oriental History. A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. Hebrew History and Literature. First term, five hours.
—PROFESSOR PHILLIPS.

3. **New Testament History and Literature.** Second term, five hours.—PROFESSOR PHILLIPS.

4. **Greek Political and Constitutional History.** First term, five hours.—PROFESSOR HAMBLIN.

5. **Roman History.** Second term, five hours.—PROFESSOR ROCKWOOD.

6. **Roman Private Life.** Second term, five hours.—PROFESSOR BALLENTINE.

7. **Medieval Europe.** General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.

8. **Modern Europe to 1789.** From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.

9. **Modern Europe since 1879.** The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.

10. **History of England, a.** Political and industrial development of the English people from the earliest times. Second term, five hours.

11. **Constitutional History of England, b.** With special reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.

12. **American Colonial History, a.** European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.

13. **American Constitutional History, b.** Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.

14. **Industrial History of United States.** Development of Busi-

ness Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. **Teachers' Course in American History.** General survey of American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VI. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

There are four terms of required work in Greek in the Classical Course, and five in the Greek Philosophical Course; while Greek may be taken as an elective during the entire Junior and Senior years. A course of New Testament Greek, designed especially for candidates for the ministry and extending through the year, is given in alternate years to Seniors and Juniors.

1. **Homer.** Odyssey, Books 5-8. Review of verb forms and syntax of verbs. Epic forms and styles. Word lists. Metre. First term, Freshman year.

2. **Lysias.** Six orations. Inflection and syntax of nouns. Prose composition. Attic oratory. Translation at sight and hearing. Second term, Freshman year.

3. **Plato.** Apology and selections. Special topics in Greek Syntax. Philosophy and influence of Socrates. The Sophists. Extracts from the Memorabilia at sight. Third term, Freshman year.

4. **Greek Political and Constitutional History.** Bury's History of Greece is used as a text-book. The class is also required to do collateral reading on important epochs. First term, Sophomore year.

5. **Demosthenes.** Olynthiacs and Philippics. History and

Politics of the Macedonian period. Style of Demosthenes. Second term, Sophomore year.

6. *Æschylus and Sophocles.* Prometheus Bound and *Œdipus Tyrannus.* The drama, theatre, and metres. First term in alternate years.

7. *Euripides and Aristophanes.* Medea and The Clouds. Greek Comedy. Religious influence of the poets. Influence of the Classical on the Modern Drama. Second term in alternate years.

8. *Greek Literature in English.* A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

9. *Plato. The Phædo.* Greek Philosophy. The influence of Plato. Third term, Seniors and Juniors; alternating with 7.

BIBLICAL HISTORY AND LITERATURE.

1. *New Testament Greek.* Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Three terms. Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

2. *Hebrew History and Literature.* Beginning of the nation to the Greek period. Seniors and Juniors. First term, five hours.—PROFESSOR PHILLIPS.

3. *New Testament History and Literature.* Greek period to close of Paul's life. Seniors and Juniors. Second term, five hours.—PROFESSOR PHILLIPS.

4. *Gospels and Post-Pauline Writings.* Seniors and Juniors. Third term, five hours.—PROFESSOR PHILLIPS.

VII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

FLOYD GEORGE BALLENTINE, PH.D., PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (selected speeches) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. *Cicero. De Senectute.* Livy, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. *Livy.* Books XXI and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. *Cicero. De Officiis.* Cicero's standing as a philosopher. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. *Horace.* Selections from the Odes, Satires, and Epistles. Prosody; Historical Outlines of the Latin Language and Literature; Wilkins' Primer; Lectures. First term, Sophomore year, two divisions.

5. *Roman History.* The work is based on Meyer's Rise and Fall of Rome. Mommsen, Bury and Gibbon are used for supplementary reading. Second term, Sophomore year.

6. *Quintilian.* Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. *Juvenal.* Selected Satires. Third term; open to those who have taken Course 4.

8. *Roman Philosophy.* Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. *Plautus and Terence.* Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term, open to Seniors and Juniors; alternating with 14.

10. *Latin Inscriptions.* Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus. Annals.** Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Cæsar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.

17. **Classical Philology.** Introductory Course, one hour.

VIII. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature.** Introductory Course. Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, first term, Sophomore.

2. **English Literature from 1832.** For those who have taken Course 1; alternating with Course 13.

3. **English Literature, 1790-1832:** Wordsworth, Coleridge, Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.

4. **English Literature, 1714-1790.** For those who have taken Course 1, and alternating with Course 15.

5. **English Literature, 1600-1660.** For those who have taken Course 1 and alternating with Course 8.

6. **Shakspeare.** Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.

7. **Shakspeare.** His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.
8. **The English Drama.** Its development from the earliest times to Shakspeare. For those who have taken Course 1, and alternating with Course 5.
9. **Teachers' Course in English.** Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to College. For those who have taken Course 1, and alternating with Course 10.
10. **Principles of Literary Criticism.** For Seniors and Juniors, alternating with Course 9.
11. **American Literature**, with special reference to the national period. For those who have taken Course 1.
12. **Journalism**, a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For those who have taken Course 1.
13. **Anglo-Saxon.** Old English Language and Literature, with special elective in *Beowulf*. For those who have taken Course 1 and the required work in German.
14. **Chaucer.** Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's *The English Language*. For those who have taken Course 1 and the required work in French.
15. **Modern English.** Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.
16. **Foreign Literature in English.** Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course lectures are given on Modern English Fiction.
17. **Periods of English Literature.** Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. *Le Public et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut. Minor.*

19. *Shakspeare. Fünf Vorlesungen von Bernhard ten Brink. Minor.*

IX. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

BROMLEY SMITH, A.M., INSTRUCTOR IN RHETORIC AND ORATORY.

CHARLES CARPENTER FRIES, A.M., ASSISTANT PROFESSOR OF RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. *Rhetoric and English Composition. Introductory Course.* Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen. Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. *English Composition.* Themes, recitations, and consultations. Required of Sophomores.

(a) First term; five hours. Special attention to technical writing. Students in Engineering and in Biology.

(b) Second term; five hours. Students in the literary courses.

3. *Argumentation.* Briefs, forensics, and discussion of the principles that underlie argument. Third term; five hours. Open to students who have passed in 1 and 2.

4. (a) *English Composition. Advanced Course.* Third term; five hours. Open to Seniors and Juniors.

4. (b) *Technical Writing. Advanced Course.* Third term; five hours. Open to Seniors and Juniors.

5. *Theses.* Every member of the Junior and the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement orations. The subjects of the theses are presented to the Professor of Rhetoric before October 22 and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses

are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in the development of prose style. Five hours. Open to Seniors and Juniors.

7. **Diction and Usage.** An historical approach to questions of usage and style. Five hours. Open to Seniors and Juniors.

8. **Teachers' Course.** The theory of Rhetoric and the teaching of English Composition. Five hours. Open to Seniors who have had 3, 6, and 7.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory, aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. **Public Speaking.** Delivery of complete orations illustrating and applying the principles studied in the first and second terms. A prize is offered to the young man and one to the young woman of the Freshman Class who excel in the delivery of these orations. Required, third term.

SOPHOMORES.

4. **Public Speaking.** Close analysis and study of the details of public speaking; study of the various styles of delivery and of the

different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. **Public Speaking.** Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second, term, one hour.

6. **Public Speaking.** Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. **Public Address.** The various forms of addressing the public are studied. Beginning with open letters and editorials, the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens in the above forms. Third term, five hours; Sophomores.

8. **Practical Oratory.** Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. **Interpretative Reading.** The use of the voice in bringing out the meaning of the best literature is obtained by practice in class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors. (Counts as Minor.)

JUNIORS.

10. **Prize Contest.** A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in

composition and elocution as shown during the preceding terms of the college Course.

11. **Prize and Honor Debate.** During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. **Oral Debates.** Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. **Honors in Debating.** During the year an elective course in debating is offered to Seniors. The last debate is public.

14. **Prize in Oratory.** A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

X. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,
PROFESSOR OF FRENCH.

LEO LAWRENCE ROCKWELL, A.M.,
INSTRUCTOR IN GERMAN.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

A.—GERMAN.

1. **Elementary Course.** Grammar; German Prose; practice in writing German. Three terms.

2. **German Prose.** Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. **German Prose and Poetry.** Grammar; practice in writing German. Elective Course for those who have taken Course 2.

4. **Historical German Prose.** Practice in writing German. Elective Course for those who have taken Course 3.

5. **Modern German Novelists.** Practice in writing German. Elective Course for those who have taken Course 4.

6. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

7. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

8. **Goethe.** Practice in writing German; lectures. Elective Course for those who have taken Courses 5-7.

9. **Goethe.** Shorter Poems, *Dichtung und Wahrheit*, *Faust I*; lectures. Elective Course for those who have taken Course 8.

10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken Course 9.

11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with Course 8.

12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with Course 9.

13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with Course 10.

14. **Lotze.** *Grundzüge der Psychologie.* (Philosophy 3.)

15. **German Biological Science.** (Biology 21.)

16. **German Chemical Science.** (Chemistry 16.)

17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B.—FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.

2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken Course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken Course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken Course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken Course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken Course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken Course 6.

8. **Authors of the XVIII Century.** Practice in writing French. Lectures. Elective Course for those who have taken Course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective Course for those who have taken Course 8.

C.—SPANISH.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. First term, five hours.

2 and 3. **Spanish Prose.** Translation, Composition, Conversation. Second and third term, five hours. The courses in Spanish are open to Freshmen, optional with German and French.

D.—ITALIAN.

Special instruction for engineering students in Italian Grammar and Conversation.

XI. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNAEUS DRUM, SC.M.,
PROFESSOR OF SURVEYING.

HARRY SCHEIDY EVERETT, A.M., SC.M.,
INSTRUCTOR IN MATHEMATICS.

ERNEST LAUNCELOT TAYLOR, A.M.,
INSTRUCTOR IN MATHEMATICS AND DRAWING.

RAY PAUL BIGLER,
ASSISTANT IN SURVEYING.

HILDRED HOWARD HANN,
RAYMOND EYLER SPRENKLE,
ASSISTANTS IN DRAWING.

THOMAS LEWIS JAMES,
JOHN FREDERICK JEFFERY,
PETER PAUL BRANTLEY,
ASSISTANTS IN SHOPWORK.

CYRIL ELTON LEWIS,
HOMER MORRISON SANDERS,
ASSISTANTS IN PHYSICS.

1. **Solid Geometry.** The course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differ-

entiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. **Trigonometry.** The course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. **Analytical Geometry.** The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The course is intended to give a clear conception of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. **Higher Analytical Geometry.** The course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior year, first term, five hours.

7. **Differential Calculus.** The course includes higher derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

8. **Integral Calculus.** The course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and application to problems in Physics and Mechanics. Sophomore year, third term, five hours.

9. **Differential Equations.** A course with mechanical applications. Senior year, first term, five hours.

10. **Descriptive Astronomy.** The aim of the course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science Courses, first and second terms, one hour.

11. **General Astronomy.** The subject is taught by text-book, with illustrations in the observatory. The students have free use of the ten-inch equatorial telescope. Third term, five hours.

12. **Geodetic Astronomy.** The course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic deter-

mination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites, a course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

13. Plane and Topographical Surveying. Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text. Lectures, tests. Field practice in each position on corps using transit, Y, dumpy, and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

14. Geodetic Surveying. Minor course. Sophomore Civil Engineering, one hour throughout the year.

15. Railroad Surveying. Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary surveying for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixed grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

15a. A Course in Surveying specially adapted to their needs is offered as an elective to the Seniors in Chemical, Electrical and Mechanical Engineering.

16. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

17. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

18. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids, and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses, Sophomore year, second term, five hours, and Junior year, first term, five hours.

19-21. **Courses in Drawing.** Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

22. **Architectural Design.** The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

23-25. **General Physics.** (Three terms.) These courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory, supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) Electricity and Magnetism. Second term.

(3) Acoustics and Optics. Third term.

26-29. **Advanced Physics.** The course extends throughout the year and assumes that the student has completed Courses 23-25 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Laboratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

26. **Electrical Measurements.** In this course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

27. **Heat.** A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous-flow calorimeter and the Rowland apparatus.

28. **Light.** The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly and Lummer-Brodhun screens.

29. **Spectrum Analysis.** Recitation one hour, Laboratory eight hours per week.

Comparison, observation and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and miners; spark and arc spectra of solids; sparks and flame spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva Society, prisms of all types by the best makers, absorption cells, etc.

30. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

31. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

32-34. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

35. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

36. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurements of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

37. **Water Supply and Sanitary Engineering.** Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of streams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

38. **Contracts.** In this course are given the principles of Common Law as applied to contracts. Third term, Senior Engineering, one hour.

39. **Theoretical Mechanics.** Differential and integral calculus are required for admission to this course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of machinery, work, energy, friction, and impact. Juniors, first term, five hours.

40. **Direct Current Machinery.** This course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurements of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

41. **Alternating Current Generators, Transformers and Motors.** Electromotive force and current curves are traced, and their modifications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation and general performance of alternating current apparatus are studied in detail. This course must be preceded by the course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

42. **Design of Electrical Machinery.** During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lec-

tures, computing exercises, drawing and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

42. **Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries.** Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of secondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

44. **Telegraph, Telephone, Railway Signal and Related Apparatus.** Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, Electrical Engineering, second term, five hours.

45. **Electric Lighting, Construction, Wiring and Economics.** The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

46. **Electric Railways, Construction, Operation and Economics.** This course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

47. **Machine Design, Machine Tools.** Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

48. **Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors.** This is a general course dealing with the thermodynamics of the heat engine, the theoretical, indicated and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proxi-

mate and ultimate analyses. A large number of problems relating to steam engines, boilers and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, all Engineering Courses, third term, five hours.

49, 50, 51. **Steam Engineering.** Senior year, Mechanical Engineering, five hours, through the year.

49. **Steam Engines and Turbines.** In this course the different types of steam engines and turbines are carefully studied, going more into detail than in Course 48, special attention being given to the moving parts such as valves, valve-gears, etc. Also the various economizing appliances and their effect upon the cost of producing power are taken up. The classroom work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

50. **Boilers.** A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

51. **Steam Engine Design.** This course follows very closely Course 49, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the classroom each student is required to design and draw the parts for a steam engine of given size. Third term.

52-54. **Shopwork.** In Mechanical Engineering, shopwork is required of students throughout the four years of the course. In Civil, Electrical and Chemical Engineering, it is required throughout four terms. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four courses are given, each extending through a year.

52. **Wood-working.** The course in wood-working consists of carpentry, cabinet work and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

52. **Pattern-making and Moulding.** A general course covering

patternmaking, simple moulding and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes and electric motors are made and assembled during the course. Sophomore year, all Engineering Courses, four hours.

54. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history and design being discussed. Each student is required to design the parts, make the patterns and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

55. Steam Engine. The work in this course is similar to that in Course 53, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

56. Internal Combustion Engines. A lecture course supplemented by reading and problems. It starts with the general theory of the internal combustion engine, expanding into a detailed study of the actual machine as manufactured and used. Special attention is given to the different types of engines, methods of introducing the working fluid and the various systems of ignition, the automobile engine receiving a major portion of the time. Senior year, fall term, four hours.

57. Heating and Ventilation. In this course a general study of the various systems of heating buildings is taken up. Attention is given to the comparative merits, under differing circumstances, of the different systems, such as hot air, steam, hot water; direct and indirect heating; ventilation by fan and by natural air currents, special emphasis being given to installing details such as piping systems, location of drips, air valves, etc., together with computation of costs and efficiencies. The lectures are accompanied with problems and experiments. Senior year, winter term, four hours.

58. Refrigeration. This course consists of a series of lectures accompanied by illustrative problems bearing upon the various principles and systems of refrigeration. A study is made of the properties and action of ammonia as applied to refrigeration plants. The ice plant is studied in detail and cold storage construction is considered. The subject is taken up from the point of view both of operation and economics. Senior year, Mechanical Engineering, four hours.

XII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
INSTRUCTOR IN CHEMISTRY.

GEORGE BARNHART,
MAURICE BACON COOK,
CHARLES AUSTIN SOARS,
ASSISTANTS.

The courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigation and to train the student in the various methods of chemical research. The courses as a whole are offered to those who expect to teach chemistry or enter the testing or industrial laboratory. As chemistry is at the foundation of the natural sciences, the first courses are essential to the study of science and medicine, and are important for general culture.

1. **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. **Qualitative Analysis.** In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4, 5, 6. **Quantitative Analysis.** This course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy and water are studied.

(3) In the third term, Fire, Gas and Electro-chemical methods are practiced.

7, 8, 9. **Organic Chemistry.** Prerequisites, courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Cairus' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later; polycyclic and heterocyclic compounds; terpens and camphors are taken up. In the laboratory, preparations of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) Organic Preparations. Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) Organic Preparations. A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas law, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermodynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) **Third term.** Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity, migration of iron, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. **Chemical Preparations.** Prerequisites, Courses 1, 2, and 3. Laboratory course; ten hours per week.

(1) **First term.** Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) **Second term.** Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Relations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. **Industrial Chemistry.** A series of lectures and recitations upon the most important technical chemical operations exclusive of metallurgy. A study of the application of chemical principles, technical processes, and the mechanical method of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, Courses 1, 2, and 3.

17. **Metallurgy.** The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, Courses 1, 2, and 3.

18. **Agricultural Chemistry.** The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, Courses 1, 2, and 3.

19. **German Chemical Literature.** One hour a week, throughout the year. Prerequisites, at least two terms of German, and Courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are read, and study is made of the derivation and formation of scientific words.

20. **Physical Chemistry.** Mathematical topics.

21. **Organic Research.**

22. **History of Chemistry.**

XIII. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR OF BIOLOGY.

NORMAN HAMILTON STEWART, A.B., SC.M.,
PROFESSOR OF BIOLOGY.

ANNA ROBERTA CAREY, SC.B., A.M.
INSTRUCTOR IN PHYSIOLOGY AND HYGIENE, DOMESTIC SCIENCE
COURSES.

SAMUEL MARSHALL DAVENPORT,
ASSISTANT IN BIOLOGY.

It is the constant aim in this department to teach how to interpret nature. The student is guided in his investigations by lectures and laboratory manuals.

1a. **Human Physiology.** The aim of this course is to acquaint the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The course is intended for those who wish a general knowledge of Physiology.

1b. **Human Physiology.** General Physiology, Personal Hygiene, Home Nursing and Emergencies, Dietetics and Domestic Sanitation. Three terms, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors.

3. **Comparative Psychology.** Text-book, reports. Elective to Seniors and Juniors.

4. **Sanitary Science.** Lectures, one hour a week through the year.

5. **Human Osteology and Comparative Anatomy.** Recitations and dissections. In this course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. **Human Anatomy.** Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second course, similar to 6a.

7. **Normal Histology (a).** Recitations and lectures, and laboratory work. In this course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining and sectioning.

8. **Normal Histology (b).** A continuation of Course 7.

9. **Embryology.** Recitations, lectures, and laboratory work. This course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds and mammals.

10. **Biology.** Recitations and dissections. The aim of this course is to meet the needs of general education in this subject, and at the same time makes clear the fundamental principles, scope, method, history, and subdivisions of Biology and its relations to other sciences.

11. **Invertebrate Zoölogy.** Recitations and dissections. This course succeeds the Course in Biology. It takes up the study and dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. **Vertebrate Zoölogy.** Recitations and dissections. This is a continuation of Course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. **Philosophy of Zoölogy.** Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. **Entomology.** Recitations and laboratory work. In this course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. **Heredity.** Minor course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. **Phænogamic Botany.** Recitations, lectures, and field work. This is a general course including the anatomy of the representative types and their relation to the environment; a study is made of the local flora.

17. **Cryptogamic Botany.** Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. **Elements of Forestry.** A course covering the factors that control and regulate the development of our forests.

19. **Bacteriology.** Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

20. **Mineralogy and Geology.** Recitations, lectures, and laboratory work. A general course intended to give the leading facts and principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

21. **Economic Geology.** Recitations, lectures, and laboratory work.

22. **German Biological Literature.** Junior year, one hour throughout the year.

MEDICAL PREPARATORY DEPARTMENT.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on the work in the Organic Sciences. A large room has been fitted up especially for Microscopic work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of reference, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeleton, a life-sized French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia Medica. Parts of these collections are kept in the laboratories and used in classroom work.

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystallized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian antiquities. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library, ninety feet long, has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

MARGARET GEISSENHAINER MATTERN, AND EUGENE PETER BERTIN,
ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in classroom work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

The sum of twenty-five thousand dollars has recently been received as a legacy from William H. Backus, M.D., Class of 1853, the income from which is to be used in the purchase of books.

The Carnegie building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

' CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve one year or until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University, under seal that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average standing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below

8.5; or if in his Senior year it is below 9. The passing grade for graduate students is 9. No one will be recommended for graduation in the Courses of Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon the studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire course are graduated *summa cum laude*; students who attain an average of 9.2 or more are graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall, which all the students of the College are required to attend.

Attendance upon public worship in some church in town on Sunday morning is required. Students are required to attend the religious services held on Thanksgiving Day.

GOVERNMENT.

It is assumed that all who enter the courses of study in the College do so for the purpose of acquiring an education, not only of the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The College does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in her office College women who may desire advice or assistance from her.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting, missionary and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

Euepia; Theta Alpha. These are the two Literary Societies of the College for men. They hold meetings for Orations, Essays, and Debates. Each Society has a convenient hall, and by an arrange-

ment of the Faculty will always have a nearly equal number of members.

The Zeta Literary Society is composed of young women admitted to any of the courses in the College.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknell Mirror*. This periodical appears monthly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

Another association of students publishes, weekly, during the school year, the *Bucknellian*.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or classroom work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. This is now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

PHYSICAL CULTURE—WOMEN'S COLLEGE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Calisthenium of the Women's College is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes

in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

Two hours a week in the Calisthenium during the winter term is required for all resident students, Juniors and Seniors of college excepted. No student will be excused from the required exercise except by order of the Director of Gymnastics. Special exercises are prescribed for students needing individual corrective work.

Every student while exercising in the Calisthenium must wear a gymnasium suit of the pattern prescribed by the Director.

Swedish gymnastics, æsthetic gymnastics, light apparatus drill, playground work and games are taught. Lectures on health and hygiene are given throughout the year.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics, and who shall have received his preparatory training at Bucknell Academy.

The prize for 1915 was awarded to Felix Valois Mikolajczak.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1915 was awarded to Everett Thomas Jones.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1915 was awarded to Eugene Paul Bertin.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation are open for competition to the Sophomore and Freshman Classes. The prize for the Freshman Class was awarded, in 1915, to Ethel Ruth Farley.

The prizes for the Sophomore Class were awarded to Jeannette Owens, and Ruth Barthold.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1915 to Joseph Earl Malin.

The corresponding prize for women was awarded in 1915 to Ruth Emily Embrey.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1915 to Lester Judson Bartlett, first, and Clarence William Peters, second.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The first prize was awarded in 1915 to Gardner Wade Earle, and the second to Carl Edward Geiger.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A.M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The prize for excellence in Latin was awarded in 1915 to Esther Mabel McCormick.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A.M., Chaplain in the United States Navy, and a graduate from the Theological Department of this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1915 to Rudolph Peterson.

I. BUCKNELL PRIZES FOR WOMEN.

The following prizes for women were founded by William Bucknell, of Philadelphia:

1. A Senior Prize to be awarded to the member of the graduating class of the College, who shall attain the highest grade in the studies of the four years' College Course.

2. A Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

3. A Junior Prize, to be awarded to the member of the Junior Class who, being excellent in scholarship during the Junior Year, shall prepare the best essay.

4. A Sophomore Prize, to be awarded to the member of the Sophomore Class who, being excellent in scholarship during the year, shall prepare the best Sophomore essay.

5. A Freshman Prize, to be awarded to the member of the Freshman Class who, being excellent in scholarship during the year, shall prepare the best Freshman essay.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from the works which will be announced by the Professor of Rhetoric each year.

SCHOLARSHIPS.

I. BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty

young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A.M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A. B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIP.

Was established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnæ Club, is available for a woman student from Philadelphia.

X. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy members of the graduating class.

XI. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnae and friends. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able. This fund is controlled by an Executive Board, who hold their annual meeting the second Tuesday in January.

During the last twenty-eight years eighty-six young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association.

Applications for loans should be made at or before the semi-annual meeting of the Board the second Tuesday in October.

Contributions should be sent to the Treasurer, Mrs. John T. Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katherine B. Larison, Lewisburg, Pa., or Mrs. Llewellyn Phillips, Corresponding Secretary, Lewisburg, Pa.

EXTRA STUDIES.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take special work in any department of the College under the direction of the Professor of that department.

2. Such work must be assigned by the Professor, and the method of study prescribed by him.

3. If the student shall attain an aggregate average of 9 in all

the studies of the current term, and pass a satisfactory examination in the voluntary study, the work shall be credited to him.

4. Only one such study may be pursued by any one student during any one term.

5. The Professor with whom the student is working shall have the privilege of requiring a partial examination on the work done at any time during the term, and there may be regular recitations at the Professor's option.

6. The amount and quality of minor work shall be taken into account in awarding honors at graduation, but is not counted toward any degree.

EXPENSES.

The College charges amount to \$150 per annum, for those who room in the College buildings, and \$140 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as Tuition. Tuition is rated at \$50 per annum, and is included in the College charges. Students in the Course in Civil, Electrical or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged the same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$10 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damages to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms, according to the number of lights used.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board in the Academy.

Young women in the Collegiate Department room and board in the Women's College. The standard annual charge for board, tuition,

furnished room, heating, lighting, is \$325. An extra charge for choice rooms in the Bucknell Cottage and in New Cottage, ranging from \$5 to \$10 per term, is made.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$10 per term is charged for gas, water, and general chemicals for each course, except Courses 1 and 2, for which the charge is \$3. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men students can board in clubs at a cost of from \$2.50 to \$3 per week. Boarding can be obtained in private families at \$4 or \$5 per week, or at the table of the Bucknell Academy at \$4 per week. No self-boarding is allowed in the College buildings.

SUMMER SESSION.

NELSON FITHIAN DAVIS, SC.D.,

DEAN OF THE SUMMER SCHOOL.

The summer courses offered at Bucknell University for 1916 will begin Tuesday, June 27, and continue for six weeks. No sessions will be held on Saturdays.

The summer courses are primarily designed for the following classes of students:

1. Teachers in the public schools who desire advanced instruction and opportunities for research with or without regard to a degree or professional advancement.

2. Students who desire to secure additional residence courses in university work.

CREDIT FOR SUMMER COURSES.

All courses will be given hour for hour credit as satisfying the requirements for a degree. All courses offered are of college grade.

ADMISSION REQUIREMENTS.

No examinations are required for admission to the summer courses. Courses are open to men and women who are qualified to pursue them to advantage, but persons who desire credit toward a degree must satisfy the entrance requirements of Bucknell University before the work may be so credited. A permanent record will be kept of all work satisfactorily completed in the summer session.

BOARD AND LODGING.

Board and lodging may be obtained near the college at reasonable rates. Classes will be so arranged that students living in all nearby towns can attend and live at home. Arrangements will be made whereby furnished rooms in the college buildings can be had provided there is demand.

REGISTRATION.

All persons who intend to take summer courses are requested to send their application to Walter S. Wilcox, the Registrar of the University, if possible, before June 1, 1916.

FEES.

The tuition for three courses, \$25. Double time courses are counted the same as two single courses.

One course, \$10; two courses, \$20; four courses, \$31.25. Students will not be allowed to take more than four courses. All bills must be paid by July 6. No credit will be extended after that date. Information regarding laboratory fees is included in the detailed announcements of the courses in science.

The college makes no reduction for late entrance or for withdrawal before the close of the session; except that a proportional part of the fee is returned to a student who is compelled, through illness or other serious cause, to discontinue his course before the middle of the session.

LIBRARY AND MUSEUMS.

The Carnegie Library and the Museums of the University will be open for the use of the summer students without charge.

DESCRIPTION OF COURSES.

For detailed description of the Courses offered, reference is made to the Special Bulletin, copies of which may be obtained by applying to the Registrar, Walter Samuel Wilcox, Sc.M.

The Courses will include School Administration, History of Education, Child Psychology, Methods of Teaching English, Teachers' Biology, History (Economic and Political) of the United States; Courses in the Latin, French and Spanish Languages; in English Literature; in Rhetoric and Oratory; in Algebra and Trigonometry; in Chemistry and in Biology.

WALTER SAMUEL WILCOX, REGISTRAR,
Lewisburg, Penna.

TEACHERS' CERTIFICATES.

Teachers' Provisional Certificates of Pennsylvania are issued to graduates of Bucknell University good for three years; Permanent Certificates are issued upon three years' successful experience in teaching in the schools of the state. Teachers' Certificates are also issued to graduates of Bucknell University by the Department of Education State of New York, State of New Jersey, and all other states which issue certificates to the graduates of any colleges.

SIXTY-FIFTH ANNUAL COMMENCEMENT.

WEDNESDAY, JUNE 16, 1915.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

GARDNER WADE EARLE,
CARL EDWARD GEIGER,
SIDNEY GRABOWSKI,
GEORGE PENTLOW HERN,

GEORGE ALLISON IRLAND,
ESTHER MABEL MCCORMICK,
ROBERT ELSMERE OBERDORF,
RUDOLPH PETERSON.

ORATIONS MAGNA CUM LAUDE.

FLORENCE BROWN BARBER,
FRANCES FOSTER BARBER,
WILLIAM ELTON BOTT,
EDGAR TILLMAN CLAPP,
EDWARD OLIVER CLARK,
EMMA ELIZABETH DILLON,
HAROLD CHARLES EDWARDS,
JOSEPH FRANK GDANIEC,
ALBERT JOSEPH HAMLIN,

HUGH CHARLES HOUSER,
GEORGE THOMPSON KEECH,
GILBERT JUDSON MEREDITH,
CARLTON ALFRED MICHAEL,
WINIFRED WILBUR MILLER,
CLARENCE WILLIAM PETERS,
EDGAR LLOYD ROGERS,
OMAR HARRISON SMITH,
GEORGE SALVADORE STEVENSON,

ELNORA LOUISE TRESPCOTT.

ORATIONS CUM LAUDE.

JOSEPH WILLIAM ALESHOUCKAS,
JEREMIAH BUTLER BATES,
MELVILLE BEARDSLEY,
ISABELLE FRANCES BOND,
MABEL PAULINE BOYER,
MABEL MAY BROWN,
ALBERT JOHN CLARK,
EDMUND BELFOUR CLINE,
RAYMOND E. CROSS,
WALTER SUPPLEE CROUSE,

IRA SYLVESTER DUNKLE,
ARTHUR ELTON EVANS,
FREDERICK HARRISON FAHRINGER,
MARGARET CHRISTINE GRETZINGER,
FREDERICK TWINING HARRIS,
JOHN WILLIAM HEDGE,
ROLAND KEILHOLTZ HOKE,
ROBERT PARRY HOPKINS,
PEARL IDA KAWEL,
BENJAMIN WINTERS LAIDLAW,

RAMONA FRANCES LENINGTON,	DWITE HAYDEN SCHAFFNER,
FRED FELTON MELLOTT,	WILLIAM HILLIARD SCHUYLER,
GEORGIANA MOORE,	MYRNA RUTH STRICKLER,
WILLARD LESTER MOYER,	EARL SCHNEIDER TEED,
ELLIS LAWRENCE RAESLEY,	WALLACE JAMES WARD,
CLOYD PEOPLES ROBB,	WINIFRED WERKHEISER,
THOMAS BENNETT WILLIAMS.	

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 16, 1915.

A. DEGREES IN ARTS.

I. MASTER OF ARTS.

MILES ELTON DEAN,	ESTHER MABEL MCCORMICK,
GARDNER WADE EARLE,	NORMAN GOULD OLIVER,
WILLIAM HENRY EYSTER,	EDWARD JOHN RICHARDS,
JOHN WESLEY HALLIWELL,	ALFRED SMITH VAN OSTEN,
FRANK RUSSELL HAMBLIN,	ALVIN MONROE WEAVER,
VIOLETTA WOLFE.	

II. BACHELOR OF ARTS.

MARION RUTH BANCROFT,	SIDNEY GRABOWSKI,
FLORENCE BROWN BARBER,	CARRIE MARY JANE GRUGAN,
FRANCES FOSTER BARBER,	HUGH CHARLES HOUSER,
MABEL PAULINE BOYER,	RAMONA FRANCES LENINGTON,
MABEL MAY BROWN,	LEDA ALICE MCFARLAND,
EDWARD OLIVER CLARK,	ESTHER MABEL MCCORMICK,
EDMUND BELFOUR CLINE,	WINIFRED WILBUR MILLER,
HOPE CRAIG,	GEORGIANA MOORE,
EMMA ELIZABETH DILLON,	JESSIE MARGUERITE OSWALT,
GARDNER WADE EARLE,	CLARENCE WILLIAM PETERS,
HOWARD CHARLES EDWARDS,	MIRIAM JUSTINIA STRICKLER,
ARTHUR ELTON EVANS,	MYRNA RUTH STRICKLER,
FREDERICK HARRISON FAHRINGER,	ELNORA LOUISE TRESMOTT,
DAVID GERALD FITZGERALD,	MARK MCNINCH WALTER,
WINIFRED WERKHEISER.	

III. BACHELOR OF PHILOSOPHY.

JEREMIAH BUTLER BATES,	HAROLD RICHARD KELLY,
FRED MEINZER BURLEW,	HAROLD STANLEY MYATT,
WALTER SUPPLEE CROUSE,	ELLIS LAWRENCE RAESLEY,
IRA SYLVESTER DUNKLE,	JOHN BENJAMIN RISHIEL,
HELEN HORTENSE EEDE,	CLOYD PEOPLES ROBB,
CLAIR GEPHART GROOVER,	EDGAR LLOYD ROGERS,
JOHN WILLIAM HEDGE,	DWITE HAYDEN SCHAFFNER,
HIRAM MICHAEL WOLFE.	

B. DEGREES IN SCIENCE.

I. THE SECOND DEGREE IN GENERAL SCIENCE.

HARRY EDMUND BILGER,	JOHN WINTER RICE,
WALTER SAMUEL EISENMENGER,	HOWARD WARNER STARKWEATHER.

II. THE FIRST DEGREE IN GENERAL SCIENCE.

MELVILLE BEARDSLEY,	MARGARET CHRISTINE GRETZINGER,
ISABELLE FRANCES BOND,	PEARL IDA KAWEL,
CHARLES WARREN BROWN,	BENJAMIN WINTERS LAIDLAW,
WILLIAM ADAM CAWLEY,	NORMAN MITTERLING,
NORRIS IRA CRAIG,	EDWARD WEDDELL PANGBURN,
RAYMOND E. CROSS,	RUDOLPH PETERSON,
RALPH WENDELL FRYE,	RUSSELL CONWELL SHIPMAN,
CARL EDWARD GEIGER,	EARL SCHNEIDER TEED,
FRANK FORREST WHITAM.	

III. THE FIRST DEGREE IN BIOLOGY.

GILBERT JUDSON MEREDITH,	GEORGE SALVADORE STEVENSON,
CARLTON ALFRED MICHAEL,	WILLIAM THOMAS WINDSOR.

IV. THE FIRST DEGREE IN CHEMICAL ENGINEERING.

MALCOM BUFFINGTON,	OMAR HARRISON SMITH,
WILLARD LESTER MOYER,	WALLACE JAMES WARD,
WILLIAM HILLIARD SCHUYLER,	JOHN MOORE WINGERT.

V. THE FIRST DEGREE IN CIVIL ENGINEERING.

EDGAR TILLMAN CLAPP,	CHARLES EDGAR SELLERS,
ROLAND MONROE JONES,	JOHN HENRY SPEER, JR.,
ROBERT ELSMERE OBERDORF,	THOMAS BENNETT WILLIAMS.

VI. THE FIRST DEGREE IN ELECTRICAL ENGINEERING.

JOSEPH WILLIAM ALESHOUCKAS, FRED TWINING HARRIS,
 WILLIAM ELTON BOTT, GEORGE PENTLOW HERN,
 FRANCIS THEODORE BROWN, ROLAND KEILHOLTZ HOKE,
 JOSEPH FRANK GDANIEC, GEORGE THOMPSON KEECH,
 WILMON KEISER.

VII. THE DEGREE OF ELECTRICAL ENGINEER.

HARRY STEPHEN BASTIAN.

VIII. FIRST DEGREE IN MECHANICAL ENGINEERING.

ALBERT JOHN CLARK, ROBERT P. HOPKINS,
 ALBERT JOSEPH HAMLIN, GEORGE ALLISON IRLAND,
 FRED FELTON MELLOTT.

DEGREES CONFERRED *HONORIS CAUSA*.

I. DOCTOR OF PEDAGOGY.

JAMES MARTIN COUGHLIN, A.M.,
 FREDERICK W. ROBBINS, PH.B.

II. DOCTOR OF DIVINITY.

ANDREW FREEMAN ANDERSON, A.M., B.D.,
 THOMAS PAWLING HOLLOWAY, A.B., B.D.

COMMENCEMENT ADDRESSES.

June 16, 1915.

Baccalaureate Sermon.....THE PRESIDENT
 Sermon, Education Society.....GEORGE D. ADAMS, D.D.
 Address before the Alumni Association...FRANK M. GOODCHILD, D.D.
 Annual Address.....HON. STEFAN PANARETOFF
 Commencement Address.....THE PRESIDENT

ALUMNI ASSOCIATIONS.

The General Alumni Association.

President, CLEMENT B. LOWE, M.D., Philadelphia.

Secretary, PROF. GUIDO CARL LEO RIEMER, PH.D., Lewisburg.

The Alumni Club of Philadelphia.

President, COL. J. K. WEAVER, M.D., Norristown.

Secretary, LOUIS W. ROBEY, Philadelphia.

The Alumni Club of New York City.

President, T. A. K. GESSLER, D.D., New York City.

Secretary, ANDREW GREGG LOOMIS, A.B., LL.B., New York City.

The Alumni Club of Pittsburgh.

President, GEORGE W. ENGLISH, A.B., Pittsburgh.

Secretary, FREDERICK R. ZUG, SC.B., Carnegie.

The Alumni Club of Chicago.

President, A. R. E. WYANT, PH.D., Chicago.

Secretary, JOSEPH C. HAZEN, PH.D., Chicago.

The Alumni Club of Northeastern Pennsylvania.

President, WILLARD MAINE BUNNELL, A.B., ESQ., Scranton.

Secretary, JOHN S. WRIGHTNOUR, D.D., Scranton.

The Alumni Club of Harrisburg.

President, JOHN C. NISSLEY, A.M., ESQ., Harrisburg.

Secretary, JOHN T. SHIRLEY, Harrisburg.

The Alumni Club of Washington City.

President, HENRY H. BLISS, A.M., ESQ., Washington, D. C.

Secretary, JOHN C. HOSTETTER, SC.M., Washington, D. C.

The Alumni Club of Central Pennsylvania.

President, JUDGE THOMAS J. BALDRIDGE, Hollidaysburg.

Secretary, S. F. FORGEUS, D.D., Huntingdon.

The Alumni Club of Williamsport.

President, CLARENCE E. SPROUT, PH.B., Williamsport.

Secretary, OLIVER J. DECKER, A.B., Williamsport.

The Alumni Club of Lewisburg.

President, LEROY T. BUTLER, A.B., Lewisburg.

Secretary, LEO L. ROCKWELL, A.M., Lewisburg.

The Alumni Club of Sunbury.

President, GEORGE EDWARD DEPPEN, A.B., ESQ.

Secretary, CULLEN FRAZER SHIPMAN, A.B., ESQ.

The Alumni Club of California.

President, COL. FREEMAN TEED, A.M., Los Angeles.

Secretary, ROY J. FARR, A.B., Los Angeles.

The Alumni Club of China.

President, CHARLES WAY HARVEY, A.B., Shanghai.

Secretary, REV. LEWIS C. HYLBERT, A.B., Ningpo.

General Alumnæ Association.

President, MRS. KATE McLAUGHLIN BOURNE, A.M., Lewisburg.

Secretary, MISS MARY McLAUGHLIN, Lewisburg.

Philadelphia Alumnæ Club.

President, MISS HANNAH GOODMAN, A.M.

Secretary, MISS OLIVE CROZER RICHARDS, A.B.

Lewisburg Alumnæ Club.

President, MRS. MARY BARTOL THEISS, PH.D., Lewisburg.

Secretary, MRS. MARTHA WOLFE KALP, A.B., Lewisburg.

NAMES OF STUDENTS.

GRADUATE STUDENTS.

NAME.	MAJOR SUBJECT.	RESIDENCE.
DANIEL FLOYD K. BERTOLETTE, A.B., <i>Literature.</i>		Shamrock
JACOB KREIDER BOWMAN, A.B., <i>Science.</i>		Madison, Wis.
JOHN BENJAMIN BOYER, SC.B., <i>Science.</i>		Milroy
EDWIN CHARLES BRUSH, A.B., <i>Philosophy.</i>		Chester
PERRY AQUILLA CARIS, A.B., <i>Mathematics.</i>		Tylersville
CLARENCE BARNABAS CARVER, SC.B., <i>Mathematics.</i>		Carmel, N. Y.
WILLIAM ADAM CAWLEY, SC.B., <i>Biology.</i>		Lewisburg
JOSEPH LESLIE CROWELL, A.B., <i>Philosophy.</i>		Barnegat, N. J.
RALPH FREDERICK DAVENPORT, PH.B., <i>Pedagogy.</i>		Carlisle
FRANK GARFIELD DAVIS, PH.B., <i>Pedagogy.</i>		Valdez, Alaska
ISAAC NEWTON EARLE, JR., A.B., <i>Greek.</i>		Iloilo, Philippine Islands
FAYETTE CLINTON ESHELMAN, SC.B., <i>Biology.</i>		Philadelphia
WALTER SCOTT GEARHART, SC.B., <i>Civil Engineering.</i>		Manhattan, Kan.
MARWOOD BENJAMIN GLOVER, SC.B., <i>Jurisprudence.</i>		Philadelphia
HARRY ELMER GRESS, SC.B., <i>Pedagogy.</i>		Monessen
HORACE LEROY HALL, A.B., <i>Philosophy.</i>		Chester

NAME.	MAJOR SUBJECT.	RESIDENCE.
ORVILLE VAN WICKLE HAWKINS, PH.B.,	<i>Jurisprudence.</i>	Freneau, N. J.
FRANK RAHN HEAN, A.B.,	<i>Jurisprudence.</i>	Philadelphia
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Newark, N. J.
HARRY XING KELLY, A.B.,	<i>Languages.</i>	Factoryville
MARY ANNA KUNKEL, A.B.,	<i>Literature.</i>	Lewisburg
CHARLES WALTER LOTTE, A.B.,	<i>French.</i>	Paterson, N. J.
MINNIE ETHEL MAYNARD, A.B.,	<i>Education.</i>	Williamsport
FRANK HALFPENNY PAINTER, PH.B.,	<i>Pedagogy.</i>	Jersey Shore
RUDOLPH PETERSON, SC.B.,	<i>Education.</i>	Cresson
GEORGE WILSON POTTS, A.B.,	<i>Science.</i>	Pittsburgh
JESSE EARLE RILEY, A.B.,	<i>Economics.</i>	Bridgeport, W. Va.
FRED VALENTINE ROCKEY, A.B.,	<i>History.</i>	Camp Hill
EDGAR LLOYD ROGERS, PH.B.,	<i>Education.</i>	Nittany
DAVIS CLIFFORD RUTH, A.B.,	<i>Latin.</i>	Philadelphia
CHARLES LOY SANDERS, A.B.,	<i>English.</i>	Germantown, Ohio
CLAY SHOEMAKER SANDERS, A.B.,	<i>Languages.</i>	Germantown, Ohio
PAUL JASPER SANDERS, A.B.,	<i>Science.</i>	Summit, N. J.
DWITE HAYDEN SCHAFFNER, PH.B.,	<i>Jurisprudence.</i>	Falls Creek
ROBERT ROWE SELLERS, SC.B.,	<i>Civil Engineering.</i>	Gainesville, Fla.
JOSEPH PARDOE SHEARER, SC.B.,	<i>Biology.</i>	Baltimore, Md.
GEORGE SALVADORE STEVENSON, SC.B.,	<i>Biology.</i>	Baltimore, Md.

NAME.	MAJOR SUBJECT.	RESIDENCE.
CHESTER JOSEPH TERRILL, A.B.,	<i>Economics.</i>	Albany, N. Y.
MARTHA JANE THOMAS, PH.B.,	<i>German.</i>	Frostburg, Md.
JESSE ROY TYSON, SC.B.,	<i>Civil Engineering.</i>	Norristown
ARTHUR DAVID WALTZ, SC.B.,	<i>Biology.</i>	Hepburnville
ALVIE MCGREGOR WELCHONS, SC.B.,	<i>History.</i>	South Forks
PAUL RAYMOND WENDT, SC.B.,	<i>Economics.</i>	Philadelphia
SAMUEL KNOX WHITE, A.B.,	<i>Jurisprudence.</i>	Gettysburg
JOHN J. WILLIAMS, SC.B.,	<i>Philosophy.</i>	Wesleyville

Graduate Students, 45.

THE SENIOR CLASS.

CLASS OF 1916.

NAME.	RESIDENCE.	ROOM.
WILLIAM CHALMERS ACHESON,	<i>Pittsburgh.</i>	No. 38, East College
SAMUEL GUY ALTER,	<i>Parnassus.</i>	No. 102, East College
ESKEL VALENTINE ANDERSON,	<i>Monessen.</i>	Lewisburg
LESTER JUDSON BARTLETT,	<i>Lewisburg.</i>	Lewisburg
RAY PAUL BIGLER,	<i>Bentleyville.</i>	No. 89, East College
WADE FRANCIS BLACKBURN,	<i>Stahlstown.</i>	No. 3, East College
WARREN FOSTER BROOKS,	<i>York.</i>	No. 74, East College
SAMUEL MILTON BRYANT,	<i>Lewistown.</i>	No. 8, West Wing
DOROTHY ELIZABETH BUNNELL,	<i>Union, N. J.</i>	Women's College
BRUCE EDWARD BUTT,	<i>New Midway, Md.</i>	No. 79, East College
EDGAR CARLTON CAMPBELL,	<i>Utica, N. Y.</i>	Walker Street
RUSSELL SAVIDGE CONRAD,	<i>Sunbury.</i>	Lewisburg
JOHN JOSEPH CONWAY,	<i>Schenectady, N. Y.</i>	No. 42, West College
MAURICE BACON COOK,	<i>Philadelphia.</i>	No. 65, West College
SAMUEL MARSHALL DAVENPORT,	<i>Plymouth.</i>	No. 8, West College
ROSCOE GRANGER DAVIS,	<i>West Chester.</i>	University Avenue
JOHN JONATHAN DE HAVEN,	<i>Duncannon.</i>	Lewisburg
RUTH EMLYN EMBREY,	<i>Mahanoy City.</i>	South Fourth Street
MARGARET WASHINGTON EVANS,	<i>Plymouth.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
RUSSELL WILLIAM EVERETT,	<i>Slatington.</i>	No. 104, East College
JAMES BURK FOLEY,	<i>Renovo.</i>	University Avenue
CYRUS BROWN FOLLMER,	<i>Milton.</i>	University Avenue
CARRIE DUNBAR FORESMAN,	<i>Lewisburg.</i>	South Seventh Street
MARY ELLA FREED,	<i>Williamsport.</i>	Women's College
ARTHUR WILLIAM FULTON,	<i>Hublersburg.</i>	No. 9, East Wing
HAROLD WENDELL GIFFIN,	<i>Newton, N. J.</i>	University Avenue
CLARENCE EDWARD GLASS,	<i>Reading.</i>	Lewisburg
HELEN MARGARET GROFF,	<i>Washington, N. J.</i>	Women's College
EDWIN CHARLES HAGEMANN,	<i>Newark, N. J.</i>	No. 21, West College
HILDRED HOWARD HANN,	<i>Norwich, N. Y.</i>	No. 1, East Wing
MARIE ELIZABETH HARER,	<i>Blossburg.</i>	Women's College
LEWIS STOUT HEINEN,	<i>Milton.</i>	Milton
SARA IRENE HILBISH,	<i>Northumberland.</i>	Northumberland
HELEN IRENE HORTON,	<i>West Brownsville.</i>	South Front Street
THOMAS LEWIS JAMES,	<i>Sharon.</i>	No. 103, East College
JOHN FREDERICK JEFFERY,	<i>Wesleyville.</i>	No. 100, East College
HELEN JENKINS,	<i>Franklin.</i>	Women's College
MARY LANGLEY JONES,	<i>West Pittston.</i>	Women's College
CECILIA KITLOWSKI,	<i>Nanticoke.</i>	Women's College
JOHN ROBERTS KURTZ,	<i>Myerstown.</i>	No. 20, East College

NAME.	RESIDENCE.	ROOM.
MARY BELLE LEES,	<i>Juniata.</i>	Women's College
BURTON FREDERICK LEWIS,	<i>Wilkes-Barre.</i>	No. 79, West College
CYRIL ELTON LEWIS,	<i>Plymouth.</i>	No. 16, West Wing
HELEN DERR LEWIS,	<i>Watsonstown.</i>	Watsonstown
PAUL BRENTON LEWIS,	<i>Lewisburg.</i>	Lewisburg
JOSEPH EARL MALIN,	<i>Frazer.</i>	No. 13, East Wing
RUTH SPRAGUE MATTEEN,	<i>Huntingdon.</i>	Women's College
STERLING RAYMOND MENSCH,	<i>Wilkes-Barre.</i>	University Avenue
GEORGE FUNSTON MILLER,	<i>Lewisburg.</i>	South Second Street
THERESA CATHERINE MCCOLLUM,	<i>Lewisburg.</i>	Lewisburg
MARGARET MORTON MCFARLAND,	<i>Northumberland.</i>	Northumberland
OLIVER HAYES MCFARLAND,	<i>Watsonstown.</i>	Watsonstown
ELIZABETH LUCILE MCGEE,	<i>Parkersburg, W. Va.</i>	Women's College
JAMES EDWARD NANCARROW,	<i>Jersey Shore.</i>	University Avenue
GEORGE H. NEFF, JR.,	<i>Sunbury.</i>	Lewisburg
VERNIE GRACE NOLL,	<i>Lewisburg.</i>	Lewisburg
HIRAM PERCIVAL NORMAN,	<i>Sunbury.</i>	University Avenue
MILTON JARRETT NORMAN,	<i>Sunbury.</i>	University Avenue
ERIC ADAM OESTERLE,	<i>Woodstown, N. J.</i>	No. 82, East College
ELSIE MARTHA PARK,	<i>Montandon.</i>	Montandon
OLIVE MILLICENT PARK,	<i>Montandon.</i>	Montandon

NAME.	RESIDENCE.	ROOM.
WILLIAM LOUIS PARK,	<i>Montandon.</i>	Montandon
AMY LLEWELLYN PATTERSON,	<i>Eatontown, N. J.</i>	Women's College
KIMBER MINUM PERSING,	<i>Snydertown.</i>	Brown Street
DAYTON LEO RANCK,	<i>New Columbia.</i>	No. 12, West College
NORMAN JACOB REHMAN,	<i>Newark, N. J.</i>	No. 90, West College
ANNA LOIS REYNOLDS,	<i>Clintondale, N. Y.</i>	Women's College
KENNETH COLQUHOUN RITCHIE,	<i>Rahway, N. J.</i>	No. 9, East Wing
MARY FLORENCE ROLLINS,	<i>Altoona.</i>	Women's College
CLYDE EDWARD RUNK,	<i>Harrisburg.</i>	South Third Street
JEROME CRANMER SALSURY,	<i>Monroeton.</i>	No. 17, East Wing
HOMER MORRISON SANDERS,	<i>Vicksburg.</i>	No. 32, East College
SAMUEL MUTCHLER SHIPMAN,	<i>Paxinos.</i>	Paxinos
WILLIAM LEE SHOWERS,	<i>West Milton.</i>	West Milton
HAROLD EMERSON SMITH,	<i>Edgewood Park.</i>	Walker Street
JAMES RUSSELL SNYDER,	<i>Bentleyville.</i>	No. 85, East College
BAKER FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Market Street
DEAN DONNELL STURGIS,	<i>Uniontown.</i>	South Third Street
EDITH PAULINE SUPERKO,	<i>Nanticoke.</i>	Women's College
GRACE ISABEL SUTTON,	<i>West Newton.</i>	Women's College
LESTER ALBERT SWITZER,	<i>Hawley.</i>	No. 90, East College
RICHARD JONES WAGENSELLER TEMPLIN,	<i>Shamokin.</i>	Shamokin

NAME.	RESIDENCE.	ROOM.
CHARLES EUGENE TILTON,	<i>South Amboy, N. J.</i>	No. 80, East College
LOUIS NICOLI TRIPICIAN,	<i>Atlantic City, N. J.</i>	South Third Street
FRANK GEORGE URBANOWICZ,	<i>Mt. Carmel.</i>	No. 111, East College
SHAILER WARREN VENTRES,	<i>Port Allegany.</i>	No. 11, East Wing
EMMA ESTHER WEDDLE,	<i>West Newton.</i>	Women's College
ANNA WILLIAMS,	<i>Nanticoke.</i>	Women's College
RUTH WILLIAMS,	<i>Parsons.</i>	Women's College
HENRY CHARLES WOLFE,	<i>Lewisburg.</i>	St. George Street
VIRGINIA BLANCHE WOOD,	<i>Washington.</i>	Women's College
CHARLES RHOADES WRIGHT,	<i>Trenton, N. J.</i>	No. 10, West College
RUBY JANE YOUNG,	<i>Dewart.</i>	Women's College
Seniors, 93.		

THE JUNIOR CLASS.

CLASS OF 1917.

NAME.	RESIDENCE.	ROOM.
MEREDITH LUFFBARY ABBOTT,	University Avenue <i>Glassboro, N. J.</i>	
MILES DOMER ACKERMAN,	No. 44, East College <i>Turbotville.</i>	
EDWIN EWART AUBREY,	No. 2, East Wing <i>Kingston.</i>	
WILLIAM ROY BAKER,	No. 5, East College <i>Blairsville.</i>	
GEORGE BARNHART,	No. 59, West College <i>Sunbury.</i>	
RUTH PAULINE BARTHOLD,	Women's College <i>Bethlehem.</i>	
LOUISE ANTOINETTE BASSELL,	Women's College <i>Philippi, W. Va.</i>	
HAROLD AMOS BEERS,	Walker Street <i>Watertown, Conn.</i>	
GEORGE THOMAS BENDER,	Lewisburg <i>Lewisburg.</i>	
FRED ELKANAH BENEDICT,	No. 114, East College <i>Canton.</i>	
ARNOLD LEIGH BENTON,	No. 29, East College <i>Bradford.</i>	
EUGENE PETER BERTIN,	No. 95, West College <i>Williamsport.</i>	
PAUL WHEELER BOGGESS,	No. 23, West Wing <i>Philippi, W. Va.</i>	
PETER PAUL BRANTLEY,	No. 24½, East Wing <i>Schenectady, N. Y.</i>	
FRED CHARLES BRENNER,	No. 30, East College <i>Holidaysburg.</i>	
HELEN CHRISTINA BROWN,	Women's College <i>Morristown, N. J.</i>	
FOUNTAIN BURLEW,	No. 44, West College <i>Freneau, N. J.</i>	
CHARLES BUTCHINSKI,	No. 67, West College <i>Nanticoke.</i>	
LEROY PIERRE CALKIN,	South Third Street <i>Atlantic City, N. J.</i>	

NAME.	RESIDENCE.	ROOM.
JAMES ARLING CASE,	<i>Boonton, N. J.</i>	No. 60, East College
GEORGE BECHT CHAMPION,	<i>Montoursville.</i>	No. 71, West College
KATHERINE CLAYTON,	<i>Lewisburg.</i>	Lewisburg
MARGARET MURRAY COLLINS,	<i>Lewisburg.</i>	Lewisburg
JEANNETTE COOKE,	<i>Haddonfield, N. J.</i>	Women's College
VERA QUINDARE COUCH,	<i>Watsontown.</i>	Watsontown
WILLIAM HARVEY CRAIGHEAD,	<i>Elizabeth.</i>	Walker Street
MAURICE HOWARD CRYDER,	<i>Tyrone.</i>	No. 87, West College
RALPH BECKER DERR,	<i>Milton.</i>	Milton
JOSEPH JAMES DIRZULAITIS,	<i>Mt. Carmel.</i>	No. 29, East Wing
ROBERT DONALDSON,	<i>DuBois.</i>	No. 101, East College
ANNA EMELINE DOWNING,	<i>West Nanticoke.</i>	Water Street
DONALD ROSS DUNKLE,	<i>Lewisburg.</i>	Lewisburg
ALFRED ALLYN EARLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ARTHUR EYSTER,	<i>Fisher's Ferry.</i>	No. 1, East Wing
CARL DALIUS FELTON,	<i>Sunbury.</i>	No. 66, West College
RALEIGH MILTON FELTON,	<i>Connellsville.</i>	Walker Street
CHARLES HENRY WASHINGTON FISHER,	<i>Ashland.</i>	Lewisburg
HOWARD CHRISTOPHER FISHER,	<i>Shamokin Dam.</i>	No. 31, East College
DONALD ANTHONY FUSIA,	<i>Wilkinsburg.</i>	South Third Street
BRUCE DALLAS GALBRAITH,	<i>Bridgeton, N. J.</i>	No. 8, West Wing

NAME.	RESIDENCE.	ROOM.
NELLYLOU GARDNER,	<i>Oxford, N. J.</i>	Women's College
CHARLES CLIFFORD GILLETTE,	<i>Rushville, N. Y.</i>	No. 87, East College
EARL LEROY GRACE,	<i>Penn Yan, N. Y.</i>	No. 23½, West Wing
JOHN AUGUSTUS GRAY, JR.,	<i>Milton.</i>	East College
ARTHUR JOHNSON GREENLEAF,	<i>Quarryville.</i>	South Third Street
DONALD ALBERT HAMAN,	<i>Eagles Mere.</i>	No. 43, East College
ANNA ELLIS HANKINS,	<i>Havre de Grace, Md.</i>	Women's College
LILLIAN HELENA HANNOLD,	<i>Paulsboro, N. J.</i>	Women's College
FRANCES GERALDINE HANSON,	<i>Flemington, N. J.</i>	Women's College
CLARENCE OLIVER HARTMAN,	<i>Port Clinton.</i>	No. 61, East College
FRANK SLAYMAN HARTMAN,	<i>Elysburg.</i>	No. 8, East College
SARAH ALICE HASLAM,	<i>Philadelphia.</i>	Women's College
ALBERT WAYNE HATFIELD,	<i>Newark, N. J.</i>	No. 41, West College
CHARLES JOSEPH HAY,	<i>Pottsville.</i>	No. 108, East College
DONALD DAVID HAYES,	<i>Hartleton.</i>	South Third Street
JOHN ATHERTON HEBERLING,	<i>Shickshinny.</i>	St. George Street
HENRIETTA HEINSLING,	<i>Altoona.</i>	Women's College
HAROLD SAMUEL HOPLER,	<i>Williamsport.</i>	St. George Street
EDITH MCCLONG HORTON,	<i>Millville, N. J.</i>	Women's College
MARY ELIZABETH HUMPHREYS,	<i>Nanticoke.</i>	Women's College
ALICE SUSANNAH JOHNSON,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
AILEEN AUDREY JOHNSTON,	<i>Avonmore.</i>	Women's College
ELLA CORINNE JONES,	<i>Montrose.</i>	Women's College
EDWARD GRANT KASE,	<i>South Williamsport.</i>	No. 108, East College
DANIEL WEBSTER KEARNEY,	<i>Shamokin.</i>	No. 120, East College
BENJAMIN FRANKLIN KENDIG,	<i>Salunga.</i>	University Avenue
CHARLES CLEMENTS KEPPLER,	<i>Greensburg.</i>	No. 99, East College
HOLMAN GEORGE KNOUSE,	<i>Sunbury.</i>	No. 18, West Wing
CLARENCE MACLAY KRINER,	<i>Waynesboro.</i>	No. 73, West College
HELEN ELIZABETH KROUSE,	<i>Altoona.</i>	Women's College
ELIZABETH BOYD LEHR,	<i>Haddonfield, N. J.</i>	Women's College
HOWARD CHESTER LIEBENSBERGER,	<i>Williamsport.</i>	St. George Street
WALTER TOMLIN LODGE,	<i>Paulsboro, N. J.</i>	Lewisburg
HARRY TUTTLE LOFFT,	<i>Collingswood, N. J.</i>	No. 76, West College
JOHN FRANKLIN LONG,	<i>Flemington.</i>	No. 83, West College
ROYDEN STROVEL MATLACK,	<i>Haddon Heights, N. J.</i>	No. 90, West College
CHARLES DAVID MAURER,	<i>Shamokin.</i>	No. 112, East College
JAMES ROBERT MCCORMICK,	<i>Tyrone.</i>	No. 82, West College
LORA ELLEN MCQUAY,	<i>Emporium.</i>	Women's College
DELETH EBER MELLINGER,	<i>Ephrata.</i>	Lewisburg
DONALD RAYMOND MILLER,	<i>Mifflinburg.</i>	Mifflinburg
DAVID LANDERS MINK,	<i>Sharon.</i>	Walker Street

NAME.	RESIDENCE.	ROOM.
OLIVE EWING MOORE,	<i>Bridgeton, N. J.</i>	Women's College
ST. CLAIR MURRAY,	<i>Binghamton, N. Y.</i>	University Avenue
REGINALD SPOFFORD NEWBURY,	<i>Point Pleasant, N. J.</i>	Lewisburg
JESSE WARREN NOLL,	<i>Lewisburg.</i>	Lewisburg
EDNA ADETA OVERFIELD,	<i>West Pittston.</i>	Women's College
JEANNETTE CAROLYN OWENS,	<i>Lewisburg.</i>	Lewisburg
GEORGE GRANTHAM PAINTER,	<i>Muncy.</i>	St George Street
SARA ASENATH PARK,	<i>Ben Avon.</i>	Women's College
EARL STEWARD PEDIGO,	<i>Corry.</i>	South Third Street
*ELMER SMITH PETTIT,	<i>Woodstown, N. J.</i>	St. George Street
STERLING THOMAS POST,	<i>Dalton.</i>	Walker Street
CHARLES WILBUR POTTER,	<i>Shickshinny.</i>	No. 11, East Wing
GROVER CLEVELAND POUST,	<i>Muncy.</i>	No. 27, East College
KATHRYN ELIZABETH REDELIN,	<i>Freeland.</i>	Women's College
MARY ELIZABETH REESE,	<i>Lansford.</i>	Women's College
HERMAN FREDERICK REICH,	<i>Sunbury.</i>	No. 15, West Wing
HUGH THOMPSON RUSSELL,	<i>Mt. Pleasant.</i>	No. 38, East College
ALEXANDER MCPHERSON RUSSELL,	<i>Bedford.</i>	South Third Street
PAUL E. SANDEL,	<i>Lewisburg.</i>	Lewisburg
EDNA LENORE SAYENGA,	<i>Pittsburgh.</i>	Sixth Street

* Deceased.

NAME.	RESIDENCE.	ROOM.
SAMUEL LEROY SEEMAN,	<i>Oakmont.</i>	Lewisburg
RUSSELL M. SHEARER,	<i>Northumberland.</i>	No. 58, East College
DON BENITO SHIPMAN,	<i>Sunbury, R. D. 4.</i>	No. 31, East College
HARLEY NEVIN SHIPMAN,	<i>Sunbury.</i>	Lewisburg
FRANCES H. SILBERSTEIN,	<i>Philadelphia.</i>	Women's College
CHARLES BUNNELL SIPLEY,	<i>Nicholson.</i>	No. 15, West College
CHARLES AUSTIN SOARS,	<i>Philadelphia.</i>	No. 5, West College
IRWIN POTTER SOWERS,	<i>Pottersville, N. J.</i>	No. 19, East Wing
CLARA RAY SPEARE,	<i>Lewisburg.</i>	Lewisburg
RAYMOND EYLER SPRENKLE,	<i>Waynesboro.</i>	No. 72, West College
CLINTON IRWIN SPROUT,	<i>Picture Rocks.</i>	No. 78, East College
WARNER SPURGEON SQUIBB,	<i>McKeesport.</i>	Walker Street
FRANK EDWARD STETLER,	<i>Lewisburg.</i>	Lewisburg
ALEXANDER STORER,	<i>Pitman, N. J.</i>	South Third Street
EBER NELSON SWOPE,	<i>Waynesboro.</i>	No. 21, East Wing
RICHARD EVELEIGH THOMAS,	<i>Nanticoke.</i>	No. 55, West College
ETHEL VIOLA WARD,	<i>Lewisburg.</i>	Lewisburg
CLARENCE REUBEN WEBER,	<i>Philadelphia.</i>	No. 114, East College
JOSEPH CHARLES WEIRICK,	<i>Lewisburg.</i>	Fourth Street
EARLE BAXTER WEST,	<i>Apollo.</i>	Lewisburg
YEURITH LEVINIA WESTBAY,	<i>Elizabeth.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
AMANDA LAURA WHITAKER,	<i>Millville, N. J.</i>	Women's College
FRANK E. WILLIAMS,	<i>Nanticoke.</i>	No. 62, West College
ARTHUR ROLLAND YON,	<i>Atlantic City, N. J.</i>	South Third Street
	Juniors, 125.	

THE SOPHOMORE CLASS.

CLASS OF 1918.

NAME.	RESIDENCE.	ROOM.
ALVIN JACOB ADAMS,	<i>Bellaire, Ohio.</i>	Walker Street
CHARLES JOSEPH ANCHOR,	<i>Philadelphia.</i>	No. 71, East College
WILLIAM PALMER BACHMAN,	<i>Sunbury.</i>	No. 64, West College
GEORGE CLARK BALDT,	<i>Chester.</i>	No. 21, East College
BRUCE LEROY BANKS,	<i>Atlantic City, N. J.</i>	No. 10, East College
FRED BARNHART BAUMAN,	<i>Danville.</i>	No. 86, East College
ESTHER HANNA BAUMGARDNER,	<i>Sunbury.</i>	Women's College
RALPH BERNHEISEL BEARD,	<i>Green Park.</i>	No. 17, West Wing
MARY BARRICK BEATTY,	<i>Port Royal.</i>	Women's College
WALTER CLARENCE BEAVER,	<i>Oley, R. D. 3.</i>	No. 15, East Wing
FRANCIS JOSEPH BECKLEY,	<i>Nanticoke.</i>	No. 60, West College
JOHN EDGAR BENNETT,	<i>Port Monmouth, N. J.</i>	No. 9, West College
HIRAM JOHN BLOOM,	<i>Sunbury.</i>	No. 30, West College
MORTIMER JUDSON BONHAM,	<i>Bridgeton, N. J.</i>	No. 37, West College
CLAUDE OLIVER BOOTHROYD,	<i>Hartzdale, N. Y.</i>	No. 77, West College
RUSSELL ALBERT BOSTIAN,	<i>West Milton.</i>	West Milton
DAVID NATHANIEL BOSWELL,	<i>Lewisburg.</i>	Lewisburg
WALTER JACOB BOWER,	<i>Herndon.</i>	South Third Street
RUSSELL ELIAS BOYER,	<i>Sunbury.</i>	No. 30, West College

NAME.	RESIDENCE.	ROOM.
FRANCES LEIGHTON BROWN,	<i>Tunkhannock.</i>	Women's College
MARY MAGDALENE BUBB,	<i>Dalmatia.</i>	Women's College
ROBERT LEON BUCHER,	<i>Watsonstown.</i>	Watsonstown
RUTH MARIE CANNON,	<i>Nanticoke.</i>	Women's College
HARRY SAMUEL CASSLER,	<i>Lewisburg.</i>	Lewisburg
BERTHA CASTER,	<i>Lehighton.</i>	Women's College
ELIZABETH BIRD CHAMPION,	<i>Montoursville.</i>	Women's College
HAZARD CLINTON CHASE,	<i>Clearfield.</i>	No. 76, West College
LEROY GLEASON CLARK,	<i>Canton.</i>	No. 93, East College
MARGARET COATES,	<i>Plymouth.</i>	Women's College
ELMER RALPH CONNER,	<i>Ellwood City.</i>	No. 70, West College
RAYMOND WESTERVELT COOPER,	<i>Paterson, N. J.</i>	No. 116, East College
DAYMOND WALLACE COPELAND,	<i>Lindhurst, N. J.</i>	No. 91, West College
HARVEY DALE CRAWFORD,	<i>Brookville.</i>	No. 21, East College
CHARLES WALTER DEAN,	<i>South Williamsport.</i>	No. 52, West College
CLIFFORD COATES DECK,	<i>Trenton, N. J.</i>	No. 68, West College
ALFRED RAPHEL DELAND,	<i>Watertown, Conn.</i>	No. 72, East College
ARTHUR GILROY DEWALD,	<i>Jerseytown.</i>	No. 56, East College
MARY DEWEES,	<i>Montrose.</i>	Women's College
HELENE FORSYTH DIFFENDAFER,	<i>Nanticoke.</i>	Women's College
ADRIAN JAMES DOLPHIN,	<i>Harrison, N. J.</i>	Market Street

NAME.	RESIDENCE.	ROOM.
MARGARET DOLPHIN,	<i>Kane.</i>	Women's College
ROBERT SAXTON DOWNING,	<i>Milford, N. Y.</i>	Lewisburg
MARION MARMADUKE EARLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ABRAM EATON,	<i>Harrisburg.</i>	No. 12, West Wing
KATHRYN BURDINE EILENBERGER,	<i>Stroudsburg.</i>	Women's College
ALBERT WINSLOW ELLIOTT,	<i>Fayette City.</i>	Walker Street
REYNOLDS FRAMPTON ELLIOTT,	<i>Clarion.</i>	No. 81, West College
THOMAS AUSTIN ESHELMAN,	<i>Franklin.</i>	St. George Street
MARGARET HILL EVANS,	<i>Nanticoke.</i>	Women's College
ETHEL RUTH FARLEY,	<i>Mifflinburg.</i>	Mifflinburg
MERRILL FRANKLIN FEAIRHELLER,	<i>Spring City.</i>	No. 22, West Wing
EDITH VIRGINIA FOCHT,	<i>Lewisburg.</i>	Lewisburg
HENRY LAWRENCE FONDA,	<i>Milton.</i>	No. 15, West College
ARTHUR MEYRICK FORESMAN,	<i>South Williamsport.</i>	No. 112, East College
GROVER CLEVELAND FORESMAN,	<i>New Columbia.</i>	New Columbia
MABEL HAIN FRITZ,	<i>West Reading.</i>	Women's College
IRENE MARIE FRYE,	<i>Monessen.</i>	Sixth Street
EDITH GABEL,	<i>Richlandtown.</i>	Women's College
LLOYD LOY GARNER,	<i>Harrisburg.</i>	South Third Street
HAZEL MARIE GAY,	<i>Homer, N. Y.</i>	Women's College
WILLIAM ALLISON GEARY,	<i>Lock Haven.</i>	No. 93, East College

NAME.	RESIDENCE.	ROOM.
HAROLD DICKINSON GERMER,	<i>Harrisburg.</i>	No. 12, West Wing
JOHN STEINER GOLD,	<i>Muncy.</i>	No. 16, West Wing
HERBERT CARL GRICE,	<i>Scranton.</i>	No. 21, West College
HELEN HADDEN,	<i>Doylestown.</i>	Women's College
ELIZABETH LOUISE HAHN,	<i>Meshoppen.</i>	Women's College
LEILA GWENDOLEN HANNA,	<i>Warren.</i>	Women's College
MADONNA HARRIS,	<i>Laceyville.</i>	Women's College
STANLEY NEWTON HARRIS,	<i>Lewisburg.</i>	Loomis Street
EMERSON ROY HASSRICK,	<i>Muncy.</i>	Walker Street
ZELDA JANE HAWES,	<i>Cherry Tree.</i>	Women's College
FRANK CALDWELL HAYES,	<i>Erie.</i>	No. 84, West College
WILLIAM ROY HECKENDORN,	<i>Duncannon.</i>	Lewisburg
EMERSON MONROE HECKERT,	<i>Fisher's Ferry.</i>	No. 26, East Wing
FRANCIS LUTHER COULSON HEIKES,	<i>Dillsburg.</i>	No. 20, West Wing
LESTER ADAM HERB,	<i>Snydertown.</i>	No. 1, East College
HELEN MAFFETT HERRITT,	<i>Jersey Shore.</i>	Women's College
ERNEST WELLINGTON HEWITT,	<i>Mifflinburg.</i>	No. 76, West College
ETHEL MAY HEITER,	<i>Lewisburg.</i>	Lewisburg
ETHEL REBECCA HEWITT,	<i>Mifflinburg.</i>	Mifflinburg
WILLIAM REED HINDMAN,	<i>Clarion.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
EMIL WILLIAM HOLINGER,	<i>McKeesport.</i>	Walker Street
JENNINGS HOWARD HORNERBERG,	<i>Milton.</i>	Milton
JOSIAH LESTER HOUSER,	<i>Milroy.</i>	No. 16, West College
ALEM PRICE HULL,	<i>Montgomery.</i>	Montgomery
KARL KELCHNER HULLEY,	<i>Philippi, W. Va.</i>	No. 51, West College
NORMAN KEEN HURLEY,	<i>Salem, N. J.</i>	Walker Street
CHARLES VERNON IREDELL,	<i>Painted Post, N. Y.</i>	St. George Street
NERISSA DAGMAR JAMES,	<i>New York, N. Y.</i>	Women's College
MELVIN JOHNSON,	<i>Highlands, N. J.</i>	No. 35, West College
MILLER ALANSON JOHNSON,	<i>Lewisburg.</i>	South Third Street
WILLIAM THOMAS JOHNSON,	<i>Sunbury.</i>	Sunbury
EVERETT THOMAS JONES,	<i>Scranton.</i>	No. 93, West College
JOHN MCKEE JONES,	<i>Aliquippa.</i>	Lewisburg
CHESTER SCOTT KEEFER,	<i>Altoona.</i>	No. 86, West College
CHARLES ANDREW KISSELL,	<i>Lock Haven.</i>	South Third Street
EDWARD ANDREW KITLOWSKI,	<i>Nanticoke.</i>	No. 61, West College
ARIAL KROMER,	<i>Milton.</i>	Women's College
ELIZABETH BELINDA LAIRD,	<i>Tyrone.</i>	Women's College
AILEEN MARIE LARSON,	<i>Kane.</i>	Women's College
FRANK AMES LAWRENCE,	<i>Steelton.</i>	No. 49, East College
WALTER LARRISON LEES,	<i>Lecchburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
SAMUEL DAVID LENOX,	<i>Trenton, N. J.</i>	No. 15½ West Wing
JOSEPH STANFORD LEPLEY,	<i>Winfield.</i>	Winfield
KATHERINE MARINE LERMANN,	<i>Monessen.</i>	Women's College
DAGMAR ELLEN LETH,	<i>Trenton, N. J.</i>	Women's College
EMMA KATHERINE LEVEGOOD,	<i>Jersey Shore.</i>	Women's College
MARSH CHARLES LEWISSON,	<i>Milton.</i>	Milton
LESTER EUGENE LIGHTON,	<i>Williamsport.</i>	No. 2, West Wing
GEORGE POST LITTLE,	<i>Montrose.</i>	Lewisburg
BARTON HEARST MACKEY,	<i>Oxford.</i>	South Third Street
HENRY THOMAS MARSHALL,	<i>South Brownsville.</i>	South Third Street
CARLISLE WEAVER MASON,	<i>South Williamsport.</i>	No. 2, West Wing
JAMES STOUGHTON MATHERS,	<i>Lewisburg.</i>	Market Street
MARGARET GEISSENHAINER MATTERN,	<i>Reading.</i>	Women's College
MARGUERITE FRANCES MAY,	<i>Johnsonburg.</i>	Women's College
DOROTHY INEZ McCLINTIC,	<i>New York, N. Y.</i>	Women's College
EVELYN MCGANN,	<i>Lewisburg.</i>	Lewisburg
GERTRUDE MARY MCGOEY,	<i>Coudersport.</i>	Women's College
MARJORIE FERRIS McNALL,	<i>Muncy.</i>	Women's College
DOROTHEA FRANCES MEEK,	<i>Allenwood.</i>	Allenwood
ROBERT THEODORE MENAKER,	<i>Wilkes-Barre.</i>	No. 27, West College
FLORINE MICHAEL,	<i>Laceyville.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
FELIX VALOIS MIKOLAJCZAK,	<i>Nanticoke.</i>	No. 14, West College
GEORGE HOBART MILES,	<i>Portage.</i>	Walker Street
JAMES LAFAYETTE MILLER,	<i>Cape May, N. J.</i>	No. 92, East College
MABEL DELIA MINCH,	<i>Bridgeton, N. J.</i>	Women's College
MIRIAM AVIS MINCH,	<i>Tyler Hill.</i>	Women's College
ROBERT STORK MOORE,	<i>Bluff Point, N. Y.</i>	No. 23, West Wing
PAUL CUSTER MOSER,	<i>Connellsville.</i>	Walker Street
CLYDE FRANKLIN MOWRER,	<i>Watsontown.</i>	No. 11, West College
MALCOLM EUGENE MUSSER,	<i>Lewisburg.</i>	South Third Street
ROBERT MITCHELL NEAL,	<i>Rio Grande, N. J.</i>	East College
BOYD LAWRENCE NEWCOMB,	<i>Newport, N. J.</i>	South Third Street
LEON HENRY NOLL,	<i>Lewisburg, R. D. 2.</i>	Lewisburg
HENRY SHERMAN NORTHRUP,	<i>Monroeton.</i>	No. 17, East Wing
ARTHUR ENOCH PAULHAMUS,	<i>Cogan Station.</i>	No. 10, East Wing
SIDNEY JAMES PEALE,	<i>Eagles Mere.</i>	No. 43, East College
MARGARET BAINBRIDGE PHILLIPS,	<i>Wilkes-Barre.</i>	North Second Street
JESSIE IRENE POTTS,	<i>Greensburg.</i>	Women's College
STEPHEN FRALEY PUFF,	<i>Philadelphia.</i>	No. 110, East College
EVELYN EDWINA PUGH,	<i>Oxford.</i>	Women's College
BRUCE OLIVER RANCK,	<i>New Columbia.</i>	New Columbia
EARL PRESTON RAUB,	<i>Lewisburg.</i>	Seventh Street

NAME.	RESIDENCE.	ROOM.
JOSEPHINE FLORELLE READING,	<i>Franklin.</i>	Women's College
CAMILLA BUNKER REED,	<i>Hollidaysburg.</i>	Women's College
CHARLES AFFLERBACH REED,	<i>Philadelphia.</i>	No. 19, East Wing
MURIEL BELLE RIDER,	<i>Millville.</i>	St. Louis Street
FRANK HENRY RITTER,	<i>Paterson, N. J.</i>	University Avenue
JAMES EDWARD ROBBINS,	<i>Lewisburg.</i>	South Third Street
FORREST GLEN ROGERS,	<i>Nittany.</i>	No. 9, East Wing
HOWARD LANDIS ROSENBERGER,	<i>Schwenksville.</i>	No. 91, East College
ALVIN LAMAR RUMMER,	<i>Lock Haven.</i>	No. 16, Academy
FAY MARGUERITE SCHOCH,	<i>Huntingdon.</i>	Women's College
MIRIAM STEWART SEATON,	<i>Merchantville, N. J.</i>	Women's College
JULIUS FREDERICK SEEBACH,	<i>Hollidaysburg.</i>	No. 15, East Wing
FLORENCE PAULINE SHALTER,	<i>Reading.</i>	Women's College
FRAZIER HERBERT SHEFFER,	<i>Milroy.</i>	Walker Street
ARTHUR R. SHEPPARD,	<i>Bridgeton, N. J.</i>	No. 28, East College
DAVID CARLTON SHILLING,	<i>Sharon.</i>	No. 83, East College
WALTER STANLEY SHOFFSTALL,	<i>Kulpmont.</i>	No. 31, East Wing
GENEVIEVE SHUTTERLY,	<i>Monessen.</i>	Women's College
LOUIS WALTON SIPLEY,	<i>Nicholson.</i>	No. 81, West College
ORA BEATRICE SMITH,	<i>White Deer.</i>	White Deer
MARY SPEECE,	<i>Pittston.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
SAMUEL DALE SPOTTS,	<i>Lewisburg.</i>	North Fifth Street
GRACE ELLEN STARR,	<i>Homer, N. Y.</i>	Women's College
DANIEL RIDGWAY STEELE,	<i>Newton, N. J.</i>	Lewisburg
ELIZABETH WARD STEPHENS,	<i>Lewisburg.</i>	Lewisburg
LEROY G. STOLZ,	<i>Reading.</i>	No. 118, East College
EVERETT EVERSON STONE,	<i>Carbondale.</i>	No. 20, West Wing
REXFORD ERVIN STONE,	<i>Carbondale.</i>	No. 74, East College
RUSSELL RAY STOUT,	<i>Cedarville, W. Va.</i>	No. 51, West College
RANDALL ERNEST STOVER,	<i>Mifflinburg.</i>	Mifflinburg
WILLIAM HERBERT SUMMERS,	<i>Moscow, R. D. 3.</i>	No. 53, East College
NATHAN TEITELBAUM,	<i>Northumberland.</i>	No. 17, West College
SARA EVANS THOMPSON,	<i>Sewell, N. J.</i>	Women's College
WILLIAM TORKINGTON,	<i>Wellsboro.</i>	No. 11, East College
WILLIAM EDMUNDSON TRIMBLE,	<i>McKeesport.</i>	No. 60, West College
ELIZABETH TURNER,	<i>Nanticoke.</i>	Women's College
ROBERT CHARLES UMLAUF,	<i>Muncy.</i>	No. 92, East College
MARIE VOLKMAR,	<i>Williamsport.</i>	Women's College
EVELYN HOPE VOSBURGH,	<i>Camden, N. J.</i>	Women's College
MARIAN VOSBURGH,	<i>Camden, N. J.</i>	Women's College
HIRAM JACOB WAGNER,	<i>Smithton.</i>	Walker Street
ANNA ANGELINE WAITE,	<i>Lock Haven.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
JAMES ROYALL WALDRON,	<i>Englewood, N. J.</i>	No. 12, East College
MARGARET BRIGHT WALLACE,	<i>Palmyra, N. J.</i>	Women's College
STUART MITCHELL WALTER,	<i>Mt Carmel.</i>	Lewisburg
MILTON WHEATON WARREN,	<i>Chincoteague, Va.</i>	No. 17, East Wing
MARTHA EVELYN WETTLAUER,	<i>Williamsport.</i>	Women's College
CARMEN CAMILLA WHITEBREAD,	<i>Wilkes-Barre.</i>	Women's College
FRED NIEWEG WILLIAMSON,	<i>Lincoln University.</i>	No. 12, East Wing
HARRY GILBERT WILLSON,	<i>Williamsport.</i>	No. 14, East Wing
NEWTON LUTHER YARNALL,	<i>Mt. Carmel.</i>	No. 119, East College
JOHN CLAYTON YON,	<i>Atlantic City, N. J.</i>	South Third Street
Sophomores, 196.		

THE FRESHMAN CLASS.

CLASS OF 1919.

NAME.	RESIDENCE.	ROOM.
SAMUEL ABRAMS,	<i>Milton.</i>	Milton
MARTHA ESTHER ACHENBACH,	<i>Reading.</i>	No. 14, New Cottage
GABRIEL LEROY ADAMS,	<i>Herndon.</i>	No. 10, East College
MARGARET ELIZABETH ALLEN,	<i>Allenwood.</i>	Women's College
CHARLES LONG AMER,	<i>Williamsport.</i>	No. 24, West Wing
GRACE ELEANOR AMES,	<i>Milton.</i>	Milton
HARRY HERMAN ANGEL,	<i>Williamsport.</i>	Williamsport
EDWARD THOMAS ASHMAN,	<i>Nanticoke.</i>	No. 67, East College
VINCENT ARTHUR BALDAUF,	<i>Reynoldsville.</i>	No. 4, East College
GEORGE HAROLD BEATTIE,	<i>Shippensburg.</i>	No. 35, East College
MARY NINA BOSWELL,	<i>Lewisburg.</i>	Lewisburg
DEWITT KIEFFER BOTTS,	<i>Milton.</i>	Milton
MIRIAM NEFF BRIDGE,	<i>Jersey Shore.</i>	Women's College
HELEN ANGELINE BRIDY,	<i>Mt. Carmel.</i>	Women's College
MARGARET JANE BUCK,	<i>Weldon.</i>	Women's College
EARL KEAYS CARPENTER,	<i>Jamestown, N. Y.</i>	Market Street
AGNES CARSWELL,	<i>Williamsport.</i>	Women's College
ROBERT GONZALES CARULLA,	<i>Santiago, Cuba.</i>	Third Street
RICHARD THERON CARVOLTH,	<i>Peckville.</i>	No. 22, East Wing

NAME.	RESIDENCE.	ROOM.
JOHN ELMER CATHERMAN,	<i>Hartleton.</i>	No. 47, West College
ALEXANDER HILL CHALFANT,	<i>Brownsville.</i>	No. 46, West College
GOLDA CLARKE,	<i>Jersey Shore.</i>	Women's College
FLORENCE ADELAIDE CLEARY,	<i>Dunmore, Pa.</i>	Women's College
THOMAS COOPER COCKILL,	<i>Pottsville.</i>	No. 25, East College
CHARLES WENZEL COOK,	<i>Trenton, N. J.</i>	No. 21, West Wing
HELEN COOPER,	<i>Brookwayville.</i>	Women's College
RUTH COOPER,	<i>Brockwayville.</i>	Women's College
RAYMOND JOHN CORNISH,	<i>Carbondale.</i>	No. 73, East College
ERNEST JUDSON CRUSE,	<i>Picture Rocks.</i>	N. 79, East College
EMERSON COLLINS CUPP,	<i>Milton.</i>	Milton
CHARLES HARRIS DAVIES,	<i>St. Louis, Mo.</i>	No. 16, West College
ALDEN EUGENE DAVIS,	<i>Dickson City.</i>	No. 22, East Wing
CLARENCE ANDERSON DAVIS,	<i>Nanticoke.</i>	No. 67, East College
JOSEPH DAYKIN DENT,	<i>Pittsburgh.</i>	No. 7, East College
FLORENCE MAY DERSHIMER,	<i>Tunkhannock.</i>	Women's College
HILDA ELIZABETH DINTERMAN,	<i>Spring Grove.</i>	Women's College
MARY MARGUERITE DOWNER,	<i>Glassboro, N. J.</i>	Women's College
WILLIAM DREYER,	<i>Williamsport.</i>	No. 29, West Wing
FREDERICK EUGENE DUFFEE,	<i>Franklin.</i>	No. 13, West Wing
ESTHER CAVIN EDGE,	<i>Jeannette.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
MABELLE ALICE EEDE,	<i>Ballston Spa, N. Y.</i>	Women's College
CHARLES MALCOLM EMERICK,	<i>Nittany.</i>	No. 27, East Wing
STEWART ALBRIGHT EPLER,	<i>Reading.</i>	No. 53, West College
CHESTER ERNEST ESTLER,	<i>Boonton, N. J.</i>	No. 59, East College
PRESTON TRATE FARLEY,	<i>Newberry.</i>	New Columbia
RUTH EVELYN FARQUHAR,	<i>West Brownsville.</i>	Women's College
ETHEL MARY FELTON,	<i>Connellsville.</i>	Women's College
ALICE CAREY FERRIS,	<i>Philadelphia.</i>	Sixth Street
MARGARET MARY FINERTY,	<i>Dunmore.</i>	Women's College
NORMAN TURNER FINGER,	<i>Steelton.</i>	No. 48, East College
JEAN OLGA FLANAGAN,	<i>Pittsburgh.</i>	Women's College
FRANCIS PATRICK FLYNN,	<i>Watertown, Conn.</i>	No. 65, East College
EVERETT WARREN FRANCIS,	<i>Taylor.</i>	No. 54, West College
HAYDEE ELINOR FRANCIS,	<i>Taylor.</i>	Women's College
HARRY CLARENCE FRIES,	<i>Mercersburg.</i>	No. 20, West College
IRENE JEMIMA FRITZ,	<i>Trevorton.</i>	Women's College
MARGARET ELIZABETH FROHLING,	<i>Princeton, N. J.</i>	Women's College
DAVID CHRISTIAN GALL, JR.,	<i>Philadelphia.</i>	No. 117, East College
ALBERT LESLIE GANDY,	<i>Cape May Court House, N. J.</i>	No. 21, East Wing
ARTHUR BATEMAN GANDY,	<i>Bridgeton, N. J.</i>	No. 14, West Wing
WEBER LATCHA GERHART, JR.,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
AGNES McDOWELL GILMOUR,	<i>Paterson, N. J.</i>	Market Street
KARL GEORGE GOERDEL,	<i>Mifflinburg.</i>	Mifflinburg
IRENE ELSIE GOSSWEILER,	<i>Allentown.</i>	Women's College
HERBERT CLAIR GREENLAND,	<i>Pittston.</i>	No. 52, East College
MARY EDNA GROVE,	<i>West Milton.</i>	West Milton
SUSANNAH DUNKLE GROVE,	<i>West Milton.</i>	West Milton
MARY HALABURDA,	<i>Mt. Carmel.</i>	Second Street
META FRANCES HALDEMAN,	<i>Ivyland.</i>	Women's College
VORIS BLAINE HALL,	<i>Montgomery.</i>	No. 33, East College
HOWARD JUDSON HANN,	<i>Andover, N. Y.</i>	No. 1, East Wing
HOWARD LAVERNE HARER,	<i>Williamsport.</i>	No. 30, West Wing
WALTER ALLEN HARM,	<i>Snow Shoe.</i>	No. 40, West College
ANNA MARY HARRIS,	<i>Susquehanna.</i>	Women's College
PAUL ELMER HARTMAN,	<i>Oley.</i>	No. 24, East Wing
THOMAS RUSSELL HEDGE,	<i>Scenery Hill.</i>	No. 84, East College
KENNETH CARSWELL HEINRICH,	<i>Brockport, N. Y.</i>	No. 74, West College
JOHN CROWTHER HENDREN,	<i>Philadelphia.</i>	No. 98, East College
JAMES RUSSELL HERMAN,	<i>Edwardsville.</i>	No. 10, West Wing
EARL BUCHER HERTZLER,	<i>Richland.</i>	No. 43, West College
OLIVER AUGUSTUS HEITER,	<i>Lewisburg.</i>	Lewisburg
FRANCES MAY HILGEET,	<i>Nicholson.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
KATHERINE BISHOP HOFF,	<i>Reading.</i>	Women's College
HELEN ROBERTA HOFFA,	<i>Lewisburg.</i>	Lewisburg
CLIFFORD AMBROSE HOLLERAN,	<i>Watertown, Conn.</i>	No. 63, East College
WILLIAM FREDERICK HOLSING,	<i>Canonsburg.</i>	No. 48, West College
MARION ELINOR HYATT,	<i>York.</i>	Women's College
JOHN FRANCIS HYDE,	<i>Camden, N. J.</i>	No. 37, West College
GEORGE FREDERICK JAMMER,	<i>Trenton, N. J.</i>	No. 21, West Wing
FRANKLIN DELAVERGNE JONES,	<i>Nanticoke.</i>	No. 62, West College
EUGENE KALLAY,	<i>Leechburg.</i>	No. 25, East Wing
DOROTHY BETTY KANTER,	<i>Wilkes-Barre.</i>	Women's College
JULIA SOPHIA KARMILOWICZ,	<i>Kingston.</i>	Women's College
ELIZABETH MOUNCE KATES,	<i>Willow Grove.</i>	Women's College
ALICE MARIE KELCHNER,	<i>Altoona.</i>	Women's College
EDWIN MARTIN KEOUGH,	<i>Glassboro, N. J.</i>	No. 56, West College
RAYMOND DEWITT KLINE,	<i>Winfield.</i>	Winfield
MARJORIE REBECCA KOSTENBADER,	<i>Lewisburg.</i>	Lewisburg
CHARLES BUNNELL KREITNER,	<i>Honesdale.</i>	No. 16, East Wing
GEORGE MERRILL KUNKLE,	<i>Lewisburg.</i>	Lewisburg
JOSEPH MICHAEL KWIATEK,	<i>Olyphant.</i>	No. 64, East College
DONALD SHEEDER LAHER,	<i>Everett.</i>	No. 23, East College
NAOMI B. LANE,	<i>Lane's Mills.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
DOROTHY BEAUMONT LAWRENCE,	<i>Butler, N. J.</i>	Women's College
CHESTER ROBERT LEABER,	<i>Williamsport.</i>	No. 28, West Wing
HENRY RICHARDS LESLIE,	<i>Lewisburg.</i>	Lewisburg
ELVIRA BURLAND LEWIS,	<i>St. Clair.</i>	Women's College
RAYMOND PLANK LEWIS,	<i>Bridgeton, N. J.</i>	No. 14, West Wing
DONALD LOSE,	<i>Williamsport.</i>	No. 25, West Wing
JAMES WILLIAM LOWRY,	<i>Uniondale.</i>	No. 9, West Wing
STUART HAMLIN MAGLAUGHLIN,	<i>Altoona.</i>	No. 22, West College
BENJAMIN MARKOWITZ,	<i>Pottstown.</i>	No. 19, West Wing
DAVID JAMES MARTIN,	<i>Scranton.</i>	No. 18, West College
RICHARD ARMSTRONG MASON,	<i>Naugatuk, Conn.</i>	No. 27, East Wing
FRANCIS PATRICK McDERMOTT,	<i>Houtzdale.</i>	No. 25, East College
ARTHUR DAVID MCKINLEY,	<i>Sharon.</i>	No. 51, East College
MARGARET SALOME McLAUGHLIN,	<i>West Newton.</i>	Women's College
MARY MATILDA McLAUGHLIN,	<i>West Newton.</i>	Women's College
MARY MILLS McLEOD,	<i>Oil City.</i>	Women's College
RUTH ADELIA MINNIG,	<i>West Hazleton.</i>	Women's College
CHARLES WILLIAM MITCHELL,	<i>Milroy.</i>	No. 18, West Wing
CHARLES BYRON MOORE,	<i>Reynoldsville.</i>	No. 13, East College
GWYLADYS RUTH MORGAN,	<i>Franklin.</i>	Women's College
SIMON THOMAS MORGAN,	<i>Paterson, N. J.</i>	No. 115, East College

NAME.	RESIDENCE.	ROOM.
NEWTON FRANKLIN NEWMAN,	<i>Lewisburg.</i>	Lewisburg
KENNETH WILSON OAKLEY,	<i>Manasquan, N. J.</i>	No. 11, West Wing
ALBIN VICTOR OHLSON,	<i>Kane.</i>	No. 20, East Wing
THOMAS MAURICE ORCHARD,	<i>Carbondale.</i>	No. 88, East College
JAMES ALFRED PANGBURN,	<i>Elizabeth.</i>	No. 54, West College
HOWARD READING PARS,	<i>Williamsport.</i>	No. 13, East Wing
ELIZABETH MCLEAN PATERSON,	<i>Montgomery.</i>	Montgomery
WILLIAM JAMES PEARSON,	<i>Scranton.</i>	No. 87, West College
EMERSON VINCENT PECK,	<i>Randolph, N. Y.</i>	No. 11, West Wing
HAYES LEROY PERSON,	<i>Williamsport.</i>	No. 28, West Wing
JAMES CRAVEN PIERCE,	<i>Reading.</i>	No. 24, East College
FOREST BLANCHARD POLING,	<i>Philippi, W. Va.</i>	No. 56, West College
HARRY EUGENE POTTS,	<i>Greensburg.</i>	No. 98, East College
EDNA MILDRED POWELL,	<i>Peckville.</i>	Women's College
ALFRED LEO QUINN,	<i>Great Neck, L. I.</i>	No. 61, East College
WILBUR BARNER REAM,	<i>Lewisburg.</i>	Lewisburg
ALLEN SNADER REDDIG,	<i>Adamstown.</i>	No. 10, West Wing
JAMES KENNETH REED,	<i>Reynoldsville.</i>	No. 14, East College
MARGARETTA BARNETT REED,	<i>Harrisburg.</i>	Women's College
MILTON FREDERICK REICHENBACKER,	<i>Honesdale.</i>	No. 16, East Wing
FRANK HEILMAN RIALE,	<i>South Williamsport.</i>	No. 52, West College

NAME.	RESIDENCE.	ROOM.
FRANK WESLEY ROHRBACH,	<i>Lewisburg.</i>	Lewisburg
NELSON SAMUEL ROUNDSLEY,	<i>Millerstown.</i>	No. 27, West Wing
CHESTER FRANKLIN SCHROYER,	<i>Carroll.</i>	No. 23, East Wing
IRENE ROBERTS SCHUSTER,	<i>Blackwood, N. J.</i>	Women's College
GURNEY CARL SEEGER,	<i>Milford, N. Y.</i>	No. 39, East College
JOHN DAVID SHOEMAKER,	<i>New Bethlehem.</i>	No. 24, East Wing
HERMAN DEANE SHULTZ,	<i>Moorestburg.</i>	Moorestburg
GEORGE EDWARD SMITH,	<i>West Collingswood, N. J.</i>	No. 54, East College
KARL DAVID SMITH,	<i>Catawissa.</i>	No. 16½, East Wing
MILES WALKER SMITH,	<i>Monessen.</i>	No. 25, West College
SAMUEL JACOB SMITH,	<i>Tylersville.</i>	No. 23, East Wing
THELORA THELMA SMITH,	<i>Milton.</i>	Milton
ERNEST FREDERICK SONDER,	<i>South Williamsport.</i>	No. 31, West Wing
KATHRYN PFENNINGER SPOTTS,	<i>Lewisburg.</i>	Lewisburg
ELIZABETH FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Lewisburg
VAN KIRK STANSBURY,	<i>Carbondale.</i>	No. 58, West College
GLADYS ESTHER STANTON,	<i>Lewisburg.</i>	Lewisburg
GEORGE ALLEN STARKWEATHER,	<i>Carbondale.</i>	No. 69, East College
RUTH STEIN,	<i>Lewisburg.</i>	Lewisburg
ALFRED TENNYSON STEININGER,	<i>Lewisburg.</i>	Lewisburg
HAROLD ANDREW STEWART,	<i>Ashtabula, Ohio.</i>	No. 13, West Wing

NAME.	RESIDENCE.	ROOM.
VAUGHN DOUGLAS SUITER,	<i>Shamokin.</i>	No. 43, West College
EDWIN ERNEST SWAGLER,	<i>Scenery Hill.</i>	No. 81, East College
HELEN ELIZABETH SWARTZ,	<i>Milton.</i>	Milton
MARGUERITE WATSON TAGGART,	<i>Watsontown.</i>	Women's College
WALTER OLIVER TEUFEL,	<i>Milton.</i>	Milton
AGNES EVELYN THOMAS,	<i>Lewisburg.</i>	Lewisburg
HARRY VERNON THOMAS,	<i>Greenville.</i>	No. 50, East College
CATHERINE GEHRETT THOMPSON,	<i>Reedsville.</i>	Women's College
RAYMOND DEILY TICE,	<i>Quakertown.</i>	No. 18, East College
HELEN GLADYS VANDINE,	<i>Hazleton.</i>	Women's College
CHARLES BRIMMER WAINWRIGHT,	<i>Lewisburg.</i>	Lewisburg
CHARLES EDWARD WAINWRIGHT,	<i>East Mauch Chunk.</i>	No. 14, East College
MIRIAM GRAYCE WEAVER,	<i>Rebersburg.</i>	Women's College
OLGA PUENELL WEBB,	<i>Wildwood, N. J.</i>	Women's College
HENRY MEYER WEBER,	<i>Mt. Ranier, Md.</i>	No. 32, West Wing
CLYDE EARL RUSSELL WENRICH,	<i>Sinking Spring.</i>	No. 36, West College
WALTER SCOTT WHITE,	<i>Honeybrook.</i>	No. 16, East Wing
ROBERT ALFRED WILLIAMS,	<i>Nicholson.</i>	No. 87, West College
HAZEL WILLIAMSON,	<i>Charleroi.</i>	Women's College
BENJAMIN JAMES WILSON,	<i>West Pittston.</i>	No. 20, East Wing
KENNETH CARLISLE WINSOR,	<i>Norwich, N. Y.</i>	No. 1, East Wing

NAME.

RESIDENCE.

ROOM.

CLYDE WILLIAM WITHINGTON,	<i>Snydertown.</i>	Snydertown
DELPHINE EVA WORMSER,	<i>Paterson, N. J.</i>	Women's College
LEONARD F. WORTHINGTON,	<i>Eagles Mere.</i>	No. 42, East College
ANTHONY ENOCH WYDANOVICH,	<i>Mt. Carmel.</i>	No. 29, East Wing
EMMA IRENE YARNALL,	<i>Lewisburg.</i>	Lewisburg
CHARLES OSCAR YODER,	<i>Cowan.</i>	Cowan
GEORGE RAYMOND ZIEGENFUSS,	<i>Lavelle.</i>	No. 25, East Wing
Freshmen, 194.		

NON-MATRICULATES.

NAME.	RESIDENCE.	ROOM.
*FRANKLIN LUTHER ARTLEY,	<i>Catawissa.</i>	Montandon
CONRAD FRIEDRICH ERNST BLUNCK,	<i>Williamsport.</i>	Williamsport
WALTER ASHLEY BOYLES,	<i>Steelton.</i>	No. 47, East College
JOHN ROY GAENZLE,	<i>Reading.</i>	No. 55, East College
HENRY ALLEN GITTLEMAN,	<i>Reading.</i>	No. 50, West College
HARRY MENGES GRITTNER,	<i>Turbotville.</i>	No. 37, East College
CHARLES DANIEL HAMLIN,	<i>Catawissa.</i>	Sunbury
BENJAMIN GRIFFIN HOFFMAN,	<i>West Milton.</i>	West Milton
GEORGE CONN JACO,	<i>Uniontown.</i>	No. 22, West College
THOMAS JAMES MANGAN,	<i>Charleroi.</i>	No. 57, East College
JAMES KANE PETTITE,	<i>Brooklyn, N. Y.</i>	No. 24, West College
HENRY JAMES POWIS,	<i>Mt. Carmel.</i>	No. 70, East College

* Entered January 3, 1916.

NAME.	RESIDENCE.	ROOM.
DALLAS HENRY VANHORN,	<i>Churchville, N. Y.</i>	No. 74, West College
CARL ALFRED WALDNER,	<i>Ashland.</i>	No. 9, East College

Non-Matriculates, 14.

SUMMARY.

Graduate Students	45
The Senior Class	93
The Junior Class	125
The Sophomore Class	196
The Freshman Class	194
Non-Matriculates	14
Total in the College of Liberal Arts.....	667

THE ACADEMY.

INSTRUCTORS.

WALTER SAMUEL WILCOX, SC.M.,
PRINCIPAL.

JOSEPH LINCOLN CHALLIS, A.M.,
MATHEMATICS AND LATIN.

EDWARD JOHN RICHARDS, A.M.,
ENGLISH AND HISTORY.

GARDNER WADE EARLE, A.M.,
GREEK.

EDGAR CARLTON CAMPBELL,
GERMAN.

ALVIN LAMAR RUMMER,
LATIN.

RICHARD JONES WAGENSELLER TEMPLIN,
PHYSICS.

ACADEMY STUDENTS.

NAME.	RESIDENCE.	ROOM.
LEARD REED ALTIMUS,	<i>Lewisburg.</i>	Home
SAMUEL MCNAIR ANNAN,	<i>Emmitsburg, Md.</i>	No. 13, East Hall
OSCAR DUDLEY BERWICK,	<i>Franklin, La.</i>	No. 8, East Hall
WARREN WOODWARD BRYSON,	<i>Philadelphia.</i>	West College
DONALD BRYAN CLOWARD,	<i>Wilmington, Del.</i>	No. 17, East Hall
HERBERT SETLEY DELONG,	<i>Watsonstown.</i>	Home
WILLIAM HENRY DOHERTY,	<i>Reading.</i>	No. 10, East Hall
JULIUS ORVILLE FRAKER,	<i>Orbisonia.</i>	No. 15, East Hall
CATHERINE STOUT HEINEN,	<i>Milton.</i>	Home
WHALEN WALLACE HERB,	<i>Snydertown.</i>	Home
CAMERON BURNSIDES HOLTER,	<i>Howard.</i>	No. 9, East Hall
ALLEN EUGENE LEES,	<i>Altoona.</i>	No. 19, East Hall
GEORGE T. MORGAN,	<i>Nesquehoning.</i>	No. 20, East Hall
HAROLD CLYDE MCCULLOUGH,	<i>Washington.</i>	No. 11, East Hall
EMERSON RALPH MILLER,	<i>Ephrata.</i>	No. 19, East Hall
HARRY S. PAUL, JR.,	<i>Oakmont.</i>	No. 13, East Hall
JOY TILLMAN PROSS,	<i>Lewisburg.</i>	Home

NAME.	RESIDENCE.	ROOM.
WARREN SEEBOLD REED,	<i>Lewisburg.</i>	Home
HAROLD SHOEMAKER,	<i>Quinton, N. J.</i>	No. 17, East Hall
MANUEL DE JESUS SUROS,	<i>Manzanillo, Cuba.</i>	Lewisburg
CALVIN ELLSWORTH SWAYZE,	<i>Chester.</i>	No. 26, West Wing
EDWIN THEODORE WEAVER,	<i>Rebersburg.</i>	No. 9, East Hall
CLIFFORD ELLSWORTH WENTZ,	<i>Jersey Shore.</i>	No. 23, East Hall
JOHN PRITCHARD WILLIAMS,	<i>Shenandoah.</i>	No. 21, East Hall
CORBIN WAYLAND WYANT,	<i>Kittanning.</i>	No. 22, East Hall

SUMMARY.

Total in Academy..... 25

Number of students in University receiving instruction in Academy classes are:

German	1
Greek	6
Latin	7
Science	1
Mathematics	3

 18

Total receiving instruction in Academy..... 43

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. CLASSICAL COURSE.

FIRST FORM.

- | | |
|-------------------------------------|----------------------------------|
| I. TERM—Algebra, 5,
Latin, 5, | U. S. History, 5,
English, 5. |
| II. TERM—Algebra, 5,
Latin, 5, | English, 5,
U. S. History, 5. |
| III. TERM—Geometry, 5,
Latin, 5, | U. S. History, 5,
English, 5. |

SECOND FORM

- | | |
|---|---------------------------------------|
| I. TERM—Higher Arithmetic, 5,
Latin, 5, | Ancient History, 5,
Rhetoric, 5. |
| II. TERM { Bookkeeping,
Commercial Arithmetic, 5,
Latin, 5, | Ancient History, 5,
Rhetoric, 5. |
| III. TERM—Algebra, 5,
Cæsar, 5, | Ancient History, 5,
Literature, 5. |

THIRD FORM.

- | | |
|-------------------------------------|--------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | Greek, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | Greek, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Cicero, 5, | Anabasis, 5,
Literature, 5. |

FOURTH FORM.

- I. TERM—Geometry, 5, Cicero, 5,
Vergil, 5, Anabasis, 5.
- II. TERM—Geometry, 5, { Ovid, } 5,
Vergil, 5, { Cicero, }
Iliad, 5.
- III. TERM—Geometry, 5, Iliad, 5,
Vergil, 5, Anabasis, 5.

II. THE LATIN SCIENTIFIC COURSE.

FIRST FORM.

- I. TERM—Algebra, 5, History, 5,
Latin, 5, English, 5.
- II. TERM—Algebra, 5, History, 5,
Latin, 5, English, 5.
- III. TERM—Geometry, 5, History, 5,
Latin, 5, English, 5.

SECOND FORM

- I. TERM—Higher Arithmetic, 5, Ancient History, 5,
Latin, 5, Rhetoric, 5.
- II TERM { Bookkeeping, Ancient History, 5,
Commercial Arithmetic, 5, Rhetoric, 5.
Latin, 5,
- III. TERM—Algebra, 5, Literature, 5,
Cæsar, 5, Ancient History, 5.

THIRD FORM.

- I. TERM—Algebra, 5, Elocution, 5,
Cæsar, 5,
German, 5, or History of England, 5.
- II. TERM—Algebra, 5, Literature, 5,
Cæsar, 5,
German, 5, or Civics, 5.

- III. TERM—Algebra, 5, Literature, 5,
 Cicero, 5,
German, 5, or Botany, 5.

FOURTH FORM.

- I. TERM—Geometry, 5, *German, 5, or French, 5,*
 Vergil, 5, *or Chemistry, 5,*
 Cicero, 5, *or Physics, 5.*
- II. TERM—Geometry, 5, *German, 5,*
 Vergil, 5, *or French, 5,*
 { Cicero, } *or Chemistry, 5,*
 { Ovid, } *or Physics, 5.*
- III. TERM—Vergil, 5, *German, 5,*
 Solid Geometry, 5, *or French, 5,*
or Chemistry, 5,
or Physics, 5.

III. THE SCIENTIFIC COURSE.

FIRST FORM.

- I. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- II. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- III. TERM—Geometry, 5, History, 5,
 Latin, 5, English, 5.

SECOND FORM

- I. TERM—Higher Arithmetic, 5, Ancient History, 5,
 Latin, 5, Rhetoric, 5.
- II. TERM { Bookkeeping, Ancient History, 5,
 { Commercial Arithmetic, 5, Rhetoric, 5.
 Latin, 5,
- III. TERM—Algebra, 5, Literature, 5,
 Cæsar, 5, Ancient History, 5.

THIRD FORM.

- | | |
|-------------------------------------|------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Botany, 5, | German, 5,
Literature, 5. |

FOURTH FORM.

- | | |
|---|---|
| I. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | History of England, 5,
German, 5,
or French, 5. |
| II. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |
| III. TERM—Solid Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |

METHODS OF INSTRUCTION.

The Academy is designed to serve as a sub-freshman class, to fit young men or women to enter any of the Courses in College or Technological Schools. Graduates of High Schools with two or with three years Courses or their equivalents, are admitted and assigned to such work as will enable them to enter with advantage upon college studies.

Classes are formed at the beginning of the scholastic year in the following preparatory subjects.

I. THE ENGLISH LANGUAGE.

A thorough grounding in the principles of English Grammar is indispensable to the student's progress in the subsequent language studies. The continuous application of this knowledge in Composition, and the constant comparison with the forms and idioms of the Ancient Languages, prepare the way for the study of elementary Rhetoric, and the appreciative reading of the English and American Literatures.

The work required is identical with the "Scheme of Uniform Entrance Examinations in English Language and Literature," adopted by the "Association of Colleges and Preparatory Schools of the Middle States and Maryland." It comprises (a) careful reading of representative works of certain authors, as literature; (b) thorough study as to "subject-matter, form and structure" of other selections.

II. THE LATIN LANGUAGE.

The course includes four and two third years of Latin, embracing four books of Cæsar, six orations of Cicero and six books of Vergil, besides a complete course in Grammar and Composition.

III. THE GREEK LANGUAGE.

Two terms are spent in a thorough study of White's First Greek Book. In the third term Xenophon's Anabasis is read, and special attention is given to acquiring a vocabulary and to the forms and syntax of nouns, pronouns, and adjectives. The reading of the Anabasis is continued, and the Iliad is studied and the difference of the Attic and the Homeric forms is noted. Throughout the Course, Prose

Composition is frequently required for the purpose of acquiring a vocabulary and a knowledge of syntax. The Course includes four books of the *Anabasis*, four books of the *Iliad*, besides the *Grammar* and *Prose Composition*.

IV. THE GERMAN LANGUAGE.

In the study of German, the aim is a thorough acquaintance with declensions and conjugations; facility of pronunciation; quick recognition of words both by the eye and the ear; as extensive a vocabulary as the time will allow; and by constant practice the laying of a foundation for reading, writing, and speaking the language.

V. HISTORY.

The Course in History includes a survey of the History of the United States, of England, of Greece, and of Rome. The aim is to acquaint the student with the life, the genius, the institutions, and the achievements of the respective peoples, and their part in the wider history of mankind.

VI. MATHEMATICS.

Algebra. The Course extends through one year, and includes a knowledge of the fundamental principles; Factoring, Divisors, Multiples, Fractions, Equations, Involution, Evolution, Theory of Exponents, Radicals, and Quadratic Equations. Daily blackboard work serves to apply the principles taught. The student is required both to know the methods of the solution of problems and also to explain the operation to the class.

Plane and Solid Geometry. The instruction consists in daily recitations for three terms on the Theorems and Problems given in the text-book, with original demonstrations of propositions by the students from hints and figures given in the classroom. Besides this, considerable attention is given to the solution of original Propositions, and the application of principles thus learned to the solution of numerical problems.

VII. SCIENCE.

1. Biology. One year of work in Biology is given, including Human Physiology and Botany.

2. Physics. The student is grounded in the elements of mechanics and physics. The apparatus of the College Laboratory is available for use. The historical beginnings of each subject, and subsequent development, are sketched in brief lectures. No pains

are spared to familiarize the pupil with the laws of these sciences, by instruction, experiments, review, and repeated examination. The truth of principles is proved, except where the demonstration involves mathematics of the higher Course in College.

3. Chemistry. The Course in Chemistry extends throughout the year, and includes General Chemistry and Qualitative Analysis.

(1) Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds.

(2) Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds.

(3) Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required.

VIII. ORATORY.

Class Exercises. Advanced students prepare and deliver one original oration each term. All other students have regular exercises in Composition and Declamation throughout the year. Public exercises are held before the faculty and students of the Academy. Visitors are cordially invited to these exercises.

In addition to the private rehearsals for the work above indicated, students may receive daily instruction in Elocution during the fall term. The Course includes careful drill in the Elementary sounds in Articulation and in Expression; in Analytical Reading, including the Bible and Hymns; and the reading of Shakspeare.

IX. SPECIAL BRANCHES.

The Study of Music may be pursued by Academic students in the School of Music.

Drawing. All students of the Academy may receive throughout the year weekly lessons in Free-hand Drawing and Penmanship without extra charge. Special individual instruction in Drawing in the Art Studio is afforded at twenty-four dollars per annum.

X. HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium affords opportunity for physical exercise. The Directors of the Gymnasium give regular class exercises

to the students of the Academy. Attendance upon physical training in the Gymnasium is obligatory during the Winter Term.

The Athletic Association of the Academy has been formed to encourage and regulate athletic sports. The Association is allowed to arrange match games with other similar bodies by first securing the consent of the Principal.

PUBLIC EXHIBITIONS.

FOURTH FORM.

The closing exercises of the Academy will be the Public exhibition in Oratory of the Fourth Form, on June 17, 1916.

Diplomas and Certificates will be conferred Saturday, June 17, 1916.

GENERAL INFORMATION.

ADVANTAGES.

To the student seeking preparation for College, the Academy offers unusual inducements. Its proximity to the College secures to him an atmosphere of study, acquaintance with the guides and companions of his future Course, and the benefit of numerous literary exercises to be found only in College towns. He has access to the College Library and Reading Room. The Academy is designed to fit pupils thoroughly for College and Technical Schools, and to lay broad and solid foundations for all subsequent scholarly culture and for the successful conduct of everyday affairs.

GOVERNMENT.

Students are encouraged to regard self-government as the only true government. It will be the constant endeavor to secure uprightness of character, gentlemanly deportment, and diligent application to work, by kind treatment, and high standards in conduct and study.

I. ADMINISTRATION.

1. The general control of the Academy is vested in the President of the University.

2. The government of the Academy, subject to such control, rests with the Principal of the Academy.

3. The government of each Hall is vested in the Instructor in charge, who resides in the Hall and enforces regulations for the Hours of Study, Academy Property, Hygienic Precautions, and General Deportment, and such other prudential regulations as may be ordered by the joint concurrence of the President of the University and the Principal of the Academy.

4. Each instructor shall have charge of his classes with reference to attendance upon recitations. He shall report to the Principal cases of non-attendance, and inexcusable failure on the part of students to prepare regular lessons or special work assigned.

II. VIOLATION OF RULES.

1. Any officer of the Institution becoming cognizant of any violation of the regulations by any pupil shall report the same to the Principal of the Academy, who shall make a record of the fact in a book provided for the purpose.

2. Every violation of the laws and prudential regulations of the Academy will subject the offender to a penalty of demerits, graded according to the flagrancy and frequency of the offense.

3. When the sum of a pupil's demerits equals ten it shall be the Principal's duty to notify the parent or guardian of the offender, specifying the offense; for every additional ten demerits like notification shall be made.

4. Additional disciplinary penalties in the form of reprimand, "campus," suspension, dismissal or expulsion, according to the necessities of the case, will follow repeated violations.

BUILDINGS AND ROOMS.

The Academy Buildings are described in detail in the introductory pages of the Catalogue.

The East Hall contains combined study and sleeping rooms, each designed for two students. These rooms are fifteen feet by twelve feet, with high ceilings, and contain two commodious closets and two single wire mattress beds with all necessary furniture.

ARTICLES REQUIRED.

Each student should be provided with an umbrella, overshoes, table napkins, towels, soap, and other articles usually required for personal comfort. All articles for the laundry should be marked with the owner's name.

BOARDING.

All students from a distance will occupy rooms and will board in the Academy, except for reasons jointly satisfactory to the President of the University and the Principal of the Academy.

The Principal and his family, the Instructors, and the Matron live in the building, take their meals with the boarders, and strive in all possible ways to secure the welfare and happiness of the students. The Instructors occupy rooms adjacent to the students' apartment. The appointments of the Dining Room, the character of the table supplies, the household service in general, are designed to fur-

nish the comforts of a first-class boarding house. So far as may be warranted by the deportment of the students, there will be absent from the home life of the school all needless uniformity and irksome limitations, which disregard the reasonable individual preference of pupils.

The Academy gives to furnished rooms daily and complete attention, provides and washes all bedding and bed clothing, and supplies and cares for all lights.

Engagements for board and rooms are expected to continue without change to the end of the school year for which they are made.

APPLIANCES.

The Academy is in possession of excellent apparatus for instruction. A select Reference Library, containing Encyclopedias, Lexicons, Dictionaries, Atlases, and various other helps, is accessible to students at all hours. The Classical Recitation Rooms are provided with Kiepert's Wall Maps of Ancient Geography, and with Reinhard's Album of Ancient Antiquities, mounted. Metric, apparatus, Maps and Globes render assistance in other directions.

The apparatus of the College also is accessible to the classes for purposes of experiment and illustration.

The College Library, numbering thirty thousand volumes, is available for all students.

SCHOOLROOM.

In order to insure favorable conditions of study, the Academy maintains a commodious and well-appointed schoolroom. The school life centers in this room. Here, except when engaged in recitations, day students prepare their work, unless excused for a part of the time, for good cause; here, also, all the younger students of the lower forms prepare for their recitations. Advanced students and those of maturer years, who have acquired habits of independent study, are granted the privilege of preparing part of their work in their rooms, provided that they maintain high scholarship and excellent deportment.

HOURS.

The time devoted to study and recitation amounts to nine hours every week-day, except Saturday, when it is only two hours. This time should be sacred to its purpose. Parents of day pupils are

requested to coöperate with the school in securing attention to evening study hours, and to avoid furnishing occasions or granting excuses for absence.

Students from a distance should be in Lewisburg on the day preceding the opening of each term, and no student should leave until the term has closed. Punctuality in attendance is essential to success in school work.

For terms and vacations, see the Calendar of the University.

STANDING AND PROMOTIONS.

The weekly averages of marks for recitations are recorded, and also failures in conduct and attendance. The scale for such markings ranges from 10, or perfect, to 0, or inexcusable failure. Unexcused absences count as zero.

Monthly and term examinations are held in the studies thus far completed, and term reports of the average in scholarship, attendance, and conduct of each student are sent to parents or guardians by the Principal.

No student is promoted to the next higher class whose grade in any study is less than 7.

Students who complete the Preparatory Courses of Study are admitted to standing in corresponding divisions of the Freshman Class in the College, upon the Principal's certificate, without examination.

All students who complete in a satisfactory manner any of the Courses of Study, and who have sustained irreproachable character during their school residence, shall be entitled to the diploma of the Academy.

Students attaining an average standing of 9 are encouraged to take work additional to the Regular Courses of Study.

PRIZES

THE HARRY S. HOPPER PRIZE.

Mr. Harry S. Hopper, of Philadelphia, Chairman of the Board of Trustees, offers an annual prize for excellence in Composition.

This prize for 1915 was awarded to Voris Blaine Hall.

THE DAVID PORTER LEAS PRIZE.

David P. Leas, of Philadelphia, Treasurer of Bucknell University, offers an annual prize to that member of the Third Form who shall excel in the Annual Exhibition of the Third Form in Declamation.

THE PRINCIPAL'S PRIZE.

Principal Wilcox offers an annual prize to that member of the Fourth Form who shall pronounce the best oration at the Academic Graduating Exhibition.

This prize for 1915 was awarded to Newton Franklin Newman.

LITERARY SOCIETY.

This is an organization of students for mutual improvement in literary and oratorical exercises. It has a large and convenient hall in the Main Academy Building, where meetings are held on Friday evenings.

RELIGIOUS SERVICES.

The duties of each day are opened with devotional exercises, which all students are required to attend. Devotional exercises are also held every evening, just before the evening study hour. All academic students residing on the University campus are required to attend these exercises.

Regular attendance at Sunday school and upon public worship at some church on Sunday morning, is required; also upon services on Thanksgiving Day, and the Day of Prayer for Colleges. Attendance upon Christian Endeavor or other like Young People's Society, and the mid-week prayer-meetings, while voluntary, is strongly urged upon students.

Parents or guardians are required to indicate to the Principal the church which they desire their sons or wards to attend.

The Academy students maintain a branch of the Young Men's Christian Association, which holds a weekly prayer-meeting on Tuesday evenings.

EXPENSES OF ACADEMY STUDENTS.

	<i>Per Annum.</i>
Tuition, Board, Furnished Room, Heating, Light, Care, and Incidentals	\$290.00
Tuition and Incidentals to day pupils.....	85.00

A student engaging a room is required to make a deposit of ten dollars. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

All charges are payable to the Registrar of the University in advance, at the beginning of each term.

No student is entitled to his place in his class until he has made settlement for the term bills.

An extra charge will be made for washing more than twelve pieces per week.

Students who remain in the Academy during the holiday or spring vacation will be charged at the rate of \$5.00 per week. Table boards will be charged the regular rate, \$3.50 per week.

Free scholarships covering tuition, rated at \$36 a year, are provided in all the departments of the University for the children of ministers of the Gospel *in actual service*.

The expenses for Music and Printing for Exhibition and Anniversary occasions are paid by the classes for which such expenses are incurred.

For information respecting the Academy, address the President of the University, or the Principal, Walter S. Wilcox, ScM.

THE INSTITUTE.

JOHN HOWARD HARRIS, LL.D.,
PRESIDENT OF THE UNIVERSITY.

ANNA ROBERTA CAREY, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR.

The Institute includes departments in Music, Vocal Expression, Art, and Domestic Science.

I. THE SCHOOL OF MUSIC.

FACULTY.

PAUL GEORGE STOLZ, A.M., DIRECTOR,
SCIENCE OF MUSIC, VOICE.

(Bucknell School of Music, Dr. Elysée Aviragnet, A.M.; Dr. Hugh Schussler, New York; Emrich and Soehnlín, Berlin, Germany.)

CHARLOTTE GUIONU ARMSTRONG,
VIOLIN, HISTORY OF MUSIC.

(Wyoming Seminary; New England Conservatory; Musin, New York City.)

MARY ELIZABETH SLEAR,
PIANO, HARMONY.

(Bucknell School of Music; Susquehanna University School of Music; Boyle, Peabody Institute, Baltimore, Md.)

PRISCILLA RICHARDSON HARDESTY,

PIANO, PIPE ORGAN.

(Bucknell School of Music; Institute of Musical Art, New York City; Ottmar Moll, St. Louis, Mo.; Gustav Becker, New York City.)

ETTA ALTHEA BROWN,

VOICE, SIGHT SINGING.

(Bucknell School of Music; Oscar Saenger, New York City; E. M. Young, New England Conservatory.)

MAME GERTRUDE KRAMER,

PIANO, VIRGIL CLAVIER.

(Bucknell School of Music; Virgil Piano Conservatory, New York City.)

MADAME GUISEPPINA DE SYLVA SCHOEN,

VOICE, STAGE DEPARTMENT.

(Macovaldi, Milano Conservatory; Broggio, Bologna Conservatory.)

NAMES OF STUDENTS

GRADUATE STUDENTS.

NAME.	COURSE.	RESIDENCE.
RUTH VIOLET HAINES,	<i>Piano.</i>	Winfield
CARRIE MARY JANE GRUGAN, A.B.,	<i>Piano.</i>	West Milton
JANET MENCH,	<i>Musical Art Course.</i>	Mifflinburg
WILLIAM PARSONS,	<i>Supervisor, Voice.</i>	Montgomery

FOURTH YEAR STUDENTS.

ALVIN JACOB ADAMS,	<i>Organ, Piano, Theory.</i>	Bellaire, Ohio
NELLE WOLFE AUMILLER,	<i>Supervisor, Voice, Theory.</i>	Lewisburg
GEORGE THOMAS BENDER,	<i>Piano, Theory.</i>	Lewisburg
KATHERINE BERGSTRESSER,	<i>Piano, Theory.</i>	Montgomery
JESSIE COOPER,	<i>Organ, Piano, Theory.</i>	Seranton
HELEN DENT,	<i>Piano, Theory.</i>	Northumberland
MABEL DUNKLEBERGER,	<i>Voice, Theory.</i>	Sunbury
MARGARET EVANS,	<i>Voice, Theory.</i>	Plymouth
CATHEYN JENKINS,	<i>Supervisor, Voice, Theory.</i>	Milton
CHARLOTTE LANING,	<i>Piano, Theory.</i>	Bridgeton, N. J.
CECILE MCCOLLUM,	<i>Piano, Theory.</i>	Montrose

NAME.	COURSE.	RESIDENCE.
JENNIE McLAUGHLIN,	<i>Supervisor, Voice, Theory.</i>	Lewisburg
THEODORE G. OTTO,	<i>Musical Art Course.</i>	Sellingsgrove
CAMILLA REED,	<i>Violin, Theory.</i>	Hollidaysburg
FLORENCE ROLLINS,	<i>Supervisor, Voice, Theory.</i>	Altoona
LILA MAE SHIMP,	<i>Piano, Theory.</i>	Ephrata
THEO STUCK,	<i>Supervisor, Voice, Theory.</i>	Mifflinburg
CHARLOTTE WELLIVER,	<i>Piano, Theory.</i>	Bloomsburg
RUTH WILLIAMS,	<i>Voice, Theory.</i>	Parsons
MARIE YEISLEY,	<i>Piano, Theory.</i>	Mifflinburg

THIRD YEAR STUDENTS.

AMUEL ABRAMS,	<i>Piano.</i>	Milton
ROBERT ALBERT,	<i>Violin.</i>	Milton
HARRY ANDREWS,	<i>Voice.</i>	Milton
ELIZBETH ARNDT,	<i>Voice.</i>	Milton
HECILE BOYER,	<i>Piano, Voice, Theory.</i>	Vicksburg
AGNES CAESWELL,	<i>Piano.</i>	Williamsport
ELMA DAVIS,	<i>Piano, Theory, Organ.</i>	Kane
MARIAN DENTLER,	<i>Piano.</i>	Milton
GENIA DUKE,	<i>Piano, Theory.</i>	Renovo
THOMAS ESHELMAN,	<i>Violin.</i>	Franklin

NAME.	COURSE.	RESIDENCE.
J. EMERY EVES,	<i>Voice.</i>	Millville, N. J.
ETHEL GRANT,	<i>Piano, Theory.</i>	Trevorton
PEARL GREINER,	<i>Voice.</i>	Milton
E. LOUISE HAHN,	<i>Voice.</i>	Meshoppen
DON HARPHAM,	<i>Violin.</i>	Milton
ANN MARY HARRIS,	<i>Voice.</i>	Susquehanna
EDITH HORTON,	<i>Voice.</i>	Millville, N. J.
OLIVE HUGHES,	<i>Voice.</i>	Montgomery
MILDRED JORDAN,	<i>Supervisor, Piano, Voice.</i>	Athens
PAUL K. S. PERRY,	<i>Organ.</i>	Shamokin
STEPHEN F. PUFF,	<i>Voice, Piano.</i>	Philadelphia
MARGARET SIBLE,	<i>Supervisor, Voice, Theory.</i>	Mountaintale
HAZEL TULE,	<i>Piano.</i>	Milton
FLORENCE TUTTLE,	<i>Supervisor, Voice, Theory.</i>	Port Allegany
HELEN WINNER,	<i>Supervisor, Voice, Theory.</i>	Pittsburgh
MAUDE WITHERSON,	<i>Supervisor, Voice, Theory.</i>	Houtzdale
FLORENCE YOUNGS,	<i>Piano.</i>	Blooming Grove, N. Y.

SECOND YEAR STUDENTS.

DAVID NATHANIEL BOSWELL,	<i>Voice.</i>	Lewisburg
RUTH BERGSTRESSER,	<i>Violin.</i>	Montgomery

NAME.	COURSE.	RESIDENCE.
HELEN C. BROWN,		Morristown, N. J.
ESTHER BUCHER,	<i>Piano.</i>	
DOROTHY BUNNELL,	<i>Piano, Theory.</i>	Watsontown
HELEN COOPER,	<i>Voice.</i>	Union, N. J.
RUTH COOPER,	<i>Voice.</i>	Brockwayville
RALPH DENTLER,	<i>Voice.</i>	Brockwayville
GAIL MYRA FELTON,	<i>Violin.</i>	Milton
IRENE FRYE,	<i>Piano, Theory.</i>	Kingwood, W. Va.
NELLYLOU GARDNER,	<i>Voice.</i>	Monessen
EMIL GEDRICH,	<i>Voice.</i>	Oxford, N. J.
HELEN MARGARET GROFF,	<i>Violin.</i>	Lewisburg
MARIE HABER,	<i>Voice.</i>	Washington, N. J.
ESTHER HERMANN,	<i>Voice.</i>	Blossburg
NAOMI LANE,	<i>Piano.</i>	Northumberland
ANNA LANGE,	<i>Violin.</i>	Lanes Mills
AILEEN LARSON,	<i>Piano.</i>	Milton
MARY BELLE LEES,	<i>Voice.</i>	Kane
RAYMOND LEWIS,	<i>Guitar.</i>	Juniata
UCILE MCGEE,	<i>Violin.</i>	Bridgeton, N. J.
WILLIAM LEWIS PARK,	<i>Voice.</i>	Parkersburg, W. Va.
THEL R. REMALY,	<i>Piano.</i>	Montandon
	<i>Piano, Theory.</i>	Mazeppa

NAME.	COURSE.	RESIDENCE.
LOUISE ROBINSON,	<i>Violin.</i>	Milton
MARY SHOWALTER,	<i>Piano.</i>	Milton
FRANCES SILBERSTEIN,	<i>Piano.</i>	Philadelphia
GRACE SUTTON,	<i>Piano.</i>	West Newton
W. B. UPDEGRAFF,	<i>Voice.</i>	Williamsport
MARGARET WALLACE,	<i>Voice.</i>	Palmyra, N. J.
GLADYS WILLS,	<i>Voice, Theory.</i>	Renovo

FIRST YEAR STUDENTS.

MARGARET ELIZABETH ALLEN,	<i>Voice.</i>	Watsonstown
OLIVE REGINA ANDERSON,	<i>Piano, Theory.</i>	Monessen
AMANDA BOWES,	<i>Piano.</i>	Lewisburg
MIRIAM NEFF BRIDGES,	<i>Piano.</i>	Jersey Shore
MAY BRUNNER,	<i>Piano.</i>	Lewisburg
BERTHA CASTER,	<i>Piano.</i>	Lehighton
JEANETTE COOKE,	<i>Piano.</i>	Haddonfield, N. J.
CLIFFORD COATES DECK,	<i>Voice.</i>	Trenton, N. J.
CLARENCE DERR,	<i>Voice.</i>	Milton
CHESTER ERNEST ESTLER,	<i>Voice.</i>	Boonton, N. J.
ALICE CAREY FERRIS,	<i>Piano, Theory.</i>	Philadelphia
DOROTHY FOX,	<i>Voice.</i>	West Milton

NAME.	COURSE.	RESIDENCE.
ETHEL GRAY,		Milton
	<i>Piano.</i>	
MARY ANNA HANKINS,		Bridgeton, N. J.
	<i>Voice.</i>	
ELIZABETH HARMON,		Milton
	<i>Piano.</i>	
LENORE HULSIZER,		Milton
	<i>Voice.</i>	
CECILIA KITLOWSKI,		Nanticoke
	<i>Voice.</i>	
JOSEPHINE LEOPOLD,		Milton
	<i>Voice.</i>	
ESTHER MCAFEE,		Lewisburg
	<i>Piano, Theory.</i>	
HAROLD CLYDE McCULLOUGH,		Washington
	<i>Voice.</i>	
GUSTAVE NEGRO,		Milton
	<i>Violin.</i>	
JOY TILLMAN PROSS,		Lewisburg
	<i>Piano, Theory.</i>	
EVELYN EDWINA PUGH,		Oxford
	<i>Voice.</i>	
MARION RIESS,		Mercedes, Texas
	<i>Piano, Voice, Theory.</i>	
MARY MARGARET RUHL,		Millmont
	<i>Piano, Theory.</i>	
SAMUEL SASSO,		Milton
	<i>Voice.</i>	
CECIL BROOKE SEAMAN,		Lewisburg
	<i>Voice.</i>	
ORA BEATRICE SMITH,		White Deer
	<i>Piano.</i>	
JAMES RUSSELL SNYDER,		Bentleyville
	<i>Voice.</i>	
GLEN SPRAGUE,		Milton
	<i>Piano, Theory.</i>	
EDNA TATOR,		Milton
	<i>Voice.</i>	
MARIE VOLKMAR,		Williamsport
	<i>Voice, Theory.</i>	
BEATRICE WEAVER,		Lewisburg
	<i>Piano.</i>	

NAME.	COURSE.	RESIDENCE.
MARTHA EVELYN WETTLAUFER,	<i>Piano, Theory.</i>	Williamsport
BEULAH WIRT,	<i>Piano, Theory.</i>	Sunbury

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GRADUATES, CLASS OF 1915.

NAME.	RESIDENCE.
MARION BANCROFT, B.A.,	Altoona
MYRTLE BELLE BOWSER,	Sunbury
MARY DECKER,	Montgomery
ETHEL B. GALLOWAY,	Lewisburg
CARRIE GRUGAN, B.A.,	West Milton
RUTH HAINES,	Winfield
ANNE HOLDEN,	Corsica
MARGARET JACOBS,	Milton
JEANETTE REED,	Mifflinburg
MARGUERITE STUCK,	Milton

A BRIEF HISTORY.

Music was first taught at Bucknell University in 1853 by Melville Malcolm under the supervision of the Seminary. Various teachers had charge until 1858, when Monsieur Theodore P. Held, a French artist, took charge with one assistant, and in 1864 he was given a second assistant. In 1865 Monsieur Held's position became vacant,

but he again resumed his work in 1866. In 1867 Alexander M. Loos was made Professor of Music. In 1869 Hermann F. Eberhardt took up the duties of Professor of Music and by 1870 there were sixty students enrolled in the Music Department. In 1871 a vocal teacher was added to the music faculty. In 1888 Professor Elysée Aviragnet, M. A., took charge of the Music Department. In 1892 Professor Aviragnet received the degree of Doctor of Music, after which the Music Department was known as the Bucknell University School of Music, one of the four distinct schools of the University, which are one corporation and have one President, who has general charge. Since 1903 Paul Stolz became actively associated with Dr. Aviragnet and his work in the School of Music, became his assistant, later Assistant Director, and at Dr. Aviragnet's death in 1908, his successor as Director of the School of Music. In 1915 the music faculty consisted of seven teachers, three in piano, three in voice and one in violin with an attendance of 116.

COURSES OF STUDY.

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

COURSE IN PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *études* by Biehl, Lemoine, LeCouppéy, Bertina and Czerny; introductory technical work; Sonatines, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46 and 47; Loeschorn, Op. 66; Czerny, Op. 299; Bernes, Op. 61; Easier Mozart, Haydn, Beethoven Sonatas; Little Preludes by Bach; Bach Inventions, Scales, Arpeggios and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 *Studies*; Clementi *Gradus ad Parnassum*; Moscheles, Op. 70; Bach Suites, Handel Suites, Scarlatti pieces, Beethoven Sonatas; introductory Chopin work; compositions

by Grieg, Godard, MacDowell, Moszkowski and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerto; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Études; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements and purposes of each student.

COURSE IN PIPE ORGAN.

The study of pipe organ is generally pursued by music students having at least Junior standing in piano. The Course is designed to provide a thorough education as choirmaster and organist, and provides for a training in all that pertains to intelligent performance of church music, voluntaries and the art of accompaniment; also a systematic drill in technics, registration and improvisation.

A new pipe organ for practice will be installed the present school year (1915-16).

FIRST YEAR.

Stainer's Organ Method. Schneider's Organ Studies. Easy Hymn Tunes. Registration. Sight Reading. Easy pieces by Batiste, Flagler, Lemaigre, etc.

SECOND YEAR.

Dudley Buck's Short Preludes and Fugues, and Pedal Phrasing. Bach Chorales. Difficult hymn tunes. Organ solos of various styles by Rheinberg, DuBois, etc.

THIRD YEAR.

Sonatas by Merkel, Bach and Mendelssohn. Preludes, Tocatas, Fugues. Quartet and chorus accompaniment. Selected solos by Guilmant, Malling, etc.

FOURTH YEAR.

Each Senior Must Register for Full Course.

Sonatas by Guilmant, Rebuke. Symphonies by Widor. Bach's Advanced Works. Chanting and solo accompaniment. Improvisation.

Selected solos for concert use, by Franck, Widor, Lemare, Hollins, etc. Voice (three terms).

It is very essential that an organist and choirmaster should understand the various voices he is to train, and for this reason we consider the voice requirement indispensable in the Organ Course.

A minor Course in Organ Construction will be required of graduate students in addition to the following theoretical courses:

Solfeggio and dictation (three terms).

Harmony (six terms).

Harmonic Analysis (two terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

In order to give organ students a good presence in public appearance, all organ students will be required to appear in public and semi-public recitals once each month.

COURSE IN VIOLIN.

In the Violin Course, special attention is given to correct bowing, ear training and interpretation, a thorough acquisition, technically and the study of a repertoire; with a few additions or changes to suit the individual requirements of the student, the general outline of the Course is as follows:

FIRST YEAR.

Methods of Schubert, Wohlfart, Spohr, etc. Scales and bowing exercises to promote beauty of intonation. Easy pieces.

SECOND YEAR.

Schools by De Beriot, Mazas and Kayser. First ten studies of Kreutzer.

THIRD YEAR.

Concertos by Viotti. Sonatas by Gade, Grieg and others. Études by Kreutzer, Fiorillo and Casorti.

FOURTH YEAR.

Rode Caprices and Concertos. Mendelssohn and Mozart Concertos. Solos by the best composers for the violin are used throughout the Course to develop style and phrasing.

Opportunity is given for ensemble playing to those sufficiently advanced. One year of pianoforte study is required.

Theoretical courses required for graduation:

Solfeggio and Dictation (three terms).

Harmony and Analysis (six terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

COURSE IN VIOLONCELLO.

FIRST YEAR.

Technical exercises. Major scales in two octaves. "Method Practique," by S. Lee. Studies by Dotzauer. Easy pieces.

SECOND YEAR.

Technical exercises by Cossmann. Scales in three and four octaves. Studies by Lee and Franchomme. Concertinos and pieces by Romberg.

THIRD YEAR.

Technical exercises by Fitzhagen. Advanced studies by Grutzmacher. Concertos.

FOURTH YEAR.

Technical exercises by Klengel and Becker. Advanced studies. Sonatas by Bach.

Theoretical courses. See Violin Course.

COURSE IN CONTRABASS.

FIRST YEAR.

Warnecke's Method of Playing. Scales and finger exercises. Études.

SECOND YEAR.

Vorzuegliche Uebungen, Hause's. Études. Overtures. Symphonies.

THIRD YEAR.

Warnecke's Method. Advanced Études. Beethoven Symphonies.

FOURTH YEAR.

Warnecke's Method. Part 2. Wagner Operas. Solos by Sturm and Laska.

Theoretical courses. See Violin Course.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies, by Campagnoli.

VOICE CULTURE.

Careful instruction is given in the use of the voice and the correct manner in producing purity of tone—the equalization of tone throughout the whole compass of the voice, and gain for it flexibility, fullness and durability.

TONE WORK. Physiology, breath control, voice placing.

ENUNCIATION. Attack, release, vibration, legato. (Vowels, diphthongs, and consonants.)

SIGHT SINGING. Staff notation, rhythm, ear training, harmony.

REPERTOIRE. Interpretation and classification.

SONG, ORATORIO AND OPERA COACHING.

Pupils desiring to acquire the true rendition in oratorio solo singing, as exemplified in the interpretation of the great singers and conductors, can secure the necessary knowledge and thus equip themselves for public performances.

Ensemble Singing, Duets, Trios, Quartets and Choruses from Operas and Oratorios.

Studies from the works of old masters such as Palestrina, Orlando di Lasso, Gabrieli, Leo Hassler, etc.

Production of various opera scenes.

FIRST YEAR.

Breath Control. First Vocalises of Concone. Diction. Slow Easy Songs. Solfeggios.

SECOND YEAR.

Vocalises by Concone, Marchesi, Lamperti and others. Diction. More advanced English songs. Simple Recitative. Simple Arias.

Solfeggios. Piano (one lesson weekly). Chorus. Advanced Vocalises. Song Interpretations. Velocity.

THIRD YEAR.

Advanced Vocalises. Song Interpretation. Velocity. Coloratura singing begun. Difficult Recitatives. Elaborate Arias. Solfeggios Advanced. Chorus.

FOURTH YEAR.

Complete Oratorio Rôles. Complete Opera Rôles. Preparation of Concert Programs. Chorus.

Theoretical courses required for graduation: See Theory for Piano Course.

TEACHERS' COURSE IN PUBLIC SCHOOL MUSIC.

This Course provides in a systematic manner the best teaching methods, together with a thorough drill in sight reading, ear training and harmony; also gives actual practice in conducting the classes. In most of the public schools the regular grade teachers instruct the pupils under the supervision of a supervisor trained for the work. The purpose of this department is training for such supervision; by instructing pupils how to teach others to teach sight singing.

Outline of music used in the two-year Supervisor's Course:

1 A and B. First Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co.; Progressive Music Series, Book I (Silver Burdette Co.); authors, Parker & McConally, Berge & Miessner. Melodies, New Educational Course, Ginn & Co.

2 A and B. First Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co.; Progressive Music Series, Book I (Silver Burdette Co.). First Reader, New Educational Course, Ginn & Co.

3 A and B. Second Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co. First Reader, New Educational Course, Ginn & Co.

4 A and B. Third Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co. Second Reader, New Educational Course, Ginn & Co.

5 A and B. Harmonic Second Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I

(Dann), American Book Co. Third Reader, New Educational Course, Ginn & Co.

6 A and B. Harmonic Third Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I (Dann), American Book Co.; Third Reader, New Educational Course, Ginn & Co.

7 A and B. Harmonic Fourth Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I (Dann), American Book Co. Fourth Reader, New Educational Course, Ginn & Co.

8 A and B. Junior Laurel Songs, Student's Edition, M. Teresa Armitage (C. C. Birchard & Co., Boston, Mass.). Fourth Reader, New Educational Course, Ginn & Co.

High School. Corona Song Book (Huff) Ginn & Co.; Musical Dictation; Four Part Songs by Old Masters, Opera, Oratorio.

Text Books: Psychology of Singing, Taylor; Education Through Music, Farnsworth.

The Seniors in Public School Supervisor's Course visit Milton twice each week to teach in the public schools. The Director of the School of Music teaches the high school music, also conducts a normal music class in order that the public school teachers can properly carry out the plans of the supervisors.

HARMONY.

The fundamental principles of the theory of music are embodied in the study of harmony which treats of the different chords in their natural relations and combinations. The subdivisions of the subject are as follows: Intervals, or the measurement of the difference in pitch between one tone and another; triads, seventh, and ninth chords with their inversions and resolutions; chromatically altered chords; augmented chords; cadences; suspensions; passing and changing notes; organ point; modulation.

The work consists of written exercises on basses (both figured and unfigured) and the harmonization of given melodies in three and four voices. These are corrected by the instructor out of the classroom and subsequently discussed with the students individually. Many exercises are also worked out on the blackboard by the students.

Modern Harmony, by Foote and Spalding, is used as the basis of the instruction. The Treatises of Prout, of Chadwick, and of others are used as reference books, and supplementary illustrations and explanations are given in the classroom. The course is as follows:

FALL TERM.

Musical Notation, formation of Scales, both Major and Minor, intervals, triads and chord connection. Simple part writing from given basses and sopranos; the chords of the seventh, with exercises harmonizing in open and close positions.

WINTER TERM.

Modulation. Transposition of various models in all keys. Harmonizing melodies which modulate.

SPRING TERM.

Chromatically altered chords, suspension, retardation, appoggiatura, passing tone, embellishment, pedal point.

No text book required the first term.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

SPECIAL ADVANTAGES.

Artists' Recitals. The opportunity of hearing good music rendered by artists of superior ability, is very essential in connection

with the classroom instruction. All students of the School of Music are urged to attend these concerts as they are admitted without expense beyond the fee of one dollar, which is charged with the fall term bill. Since the concerts are educational in character, the fee charge should be regarded part of the tuition.

TUITION.

Tuition is charged for instruction in music, per annum, as follows:

	<i>Full Course.</i>	<i>Half Course.</i>	<i>Quarter Course.</i>
Vocal	\$80.00	\$45.00	\$25.00
Piano or Organ.....	80.00	45.00	25.00
Violin	80.00	45.00	25.00
Supervisor's Course in Public School Music	80.00	45.00	25.00
Harmony, in private lessons.....	80.00	45.00	25.00
Harmony, in Class.....	25.00	....	....
Guitar and Mandolin, in Class.....	20.00	....	....
Use of Instruments for Practice Two Hours			
Daily	12.00	....	....

Special individual instruction in music, per lesson, \$2.00.

Full course implies two one-hour lessons per week, and theory.

Half course implies two half-hour lessons per week, and theory.

Quarter course implies one-half hour lesson per week, and theory.

No reduction is made except in case of protracted illness.

Instruction in the orchestra and in harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$235 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1915 this prize was divided between Ruth Haines and Mary Decker.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

For information respecting the School of Music, address the Director, Paul G. Stolz, A.M.

II. DEPARTMENT OF ELOCUTION.

MISS EDITH SCHILLINGER.

MISS EUDORA REGINA HAMLER, A.B.

The aim of this department is the correct study of voice and body for the effective expression of thought and emotion. Special attention is given to voice culture, articulation, gesture and interpretative reading.

Semi-monthly recitals afford opportunity for platform work.

Particular attention is given to curing persons of stammering and other defects in speech.

The interpretation and the delivery of classics have a large place in the Course.

Special courses are offered to students who wish work along special lines of expression.

The Elocution Department offers a two-years' course leading to a certificate. All applicants for the regular course must have the equivalent of a high school education.

REGULAR COURSE IN ELOCUTION.

FIRST YEAR.

Physical Culture—Exercises for health, strength and ease.

Voice Culture—Exercises for tone production and voice development.

Interpretation of Plays and Readings—Study and practice, memory training.

The study and training in expression of eighteen dramatic selections.

Rhetoric.

Literature.

Articulation.

SECOND YEAR.

Physical Culture—Æsthetic and health exercises.

Study of Gesture—Pantomime, attitudes, posing.

The Coaching of Plays—Each senior must coach one play.

The study and dramatic training of eighteen classical readings.

The study of monologues and plays. Each senior will arrange and give one Shakspeare recital.

Philosophy of Expression.

Voice Culture.

Psychology.

Literature.

Story Telling.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Institute, takes place in Bucknell Hall on the second Saturday evening in the month of May.

THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1915 the prize was awarded to Elizabeth Louise Hahn.

NAMES OF STUDENTS.

NAME.	RESIDENCE.
EDWIN EWART AUBREY,	Kingston
JEAN G. BARBER,	Belleville
WALTER CLARENCE BEAVER,	Oley
ISABELLE FRANCES BOND,	Lewisburg
MARY NINA BOSWELL,	Lewisburg
FRED CHARLES BRENNER,	Hollidaysburg
MARY MAGDALENE BUBB,	Dalmatia
MARY ADALINE BYERS,	Milton
EDGAR CARLTON CAMPBELL,	Utica, N. Y.
AGNES CARSWELL,	Williamsport
ALEXANDER HILL CHALFANT,	Brownsville
ELIZABETH BIRD CHAMPION,	Montoursville
VERA QUINDARE COUCH,	Watsontown
ALDEN EUGENE DAVIS,	Dickson City
HILDA ELIZABETH DINTERMAN,	Spring Grove
RUTH EMLYN EMBREY,	Mahanoy City
ETHEL RUTH FARLEY,	Mifflinburg
EDITH GABEL,	Richlandtown
NELLYLOU GARDNER,	Oxford, N. J.
HAZEL MARIE GAY,	Homer, N. Y.
HELEN GRAYCE GOOD,	Williamsport
CLAIR GEPHART GROOVER,	Lewisburg
ELIZABETH LOUISE HAHN,	Meshoppen
MADONNA HARRIS,	Laceyville
SARA ALICE HASLAM,	Philadelphia
JOHN CROWTHER HENDREN,	Philadelphia
NERISSA DAGMAR JAMES,	New York City
AILEEN AUDREY JOHNSTON,	Avonmore
JOHN MCKEE JONES,	Aliquippa
DOROTHY BETTY KANTER,	Wilkes-Barre
JULIA SOPHIA KARMILOWICZ,	Kingston
ARIAL KROMER,	Milton
NAOMI B. LANE,	Lane's Mills
JOSEPH EARL MALIN,	Frazer
MARGARET GEISSENHAINER MATTERN	Reading

NAME.	RESIDENCE.
MARGUERITE FRANCIS MAY,	Johnsonburg
HOWARD CLYDE McCULLOUGH,	Washington
MARY MILLS McLEOD,	Oil City
FLORINE MICHAEL,	Laceyville
GEORGE HOBART MILES,	Portage
EDITH MILLER,	Milton
MABEL DELIA MINCH,	Bridgeton, N. J.
MIRIAM AVIS MINCH,	Tyler's Hill
DAVID SANDERS MINK,	Sharon
HARRY EUGENE POTTS,	Greensburg
JESSIE IBENE POTTS,	Greensburg
DAYTON LEO RANCK,	New Columbia
KATHERINE ELIZABETH REDELIN,	Freeland
CHARLES AFFLERBACK REED,	Philadelphia
DWITE HAYDEN SCHAFFNER,	Falls Creek
FAY MARGUERITE SCHOCK,	Huntingdon
LOIS EDNA SMITH,	Milton
ORA BEATRICE SMITH,	White Deer
MARGUERITE WATSON TAGGART,	Watsonstown
SARA EVANS THOMPSON,	Sewell, N. J.
SHAILER WARREN VENTRES,	Port Alleghany
HELEN HART WINNER,	Pittsburg
VIRGINIA BLANCHE WOOD,	Washington

III. THE DEPARTMENT OF ART.

MISS HELENA WAY.

The facilities for the study of Art have been greatly increased by the accommodations allotted to this department, in a special studio, which provides such adjustments for admission of light, and unencumbered wall surface as to render it adapted for the execution and display of art production.

The aim of the department is not only to supply the best facilities for the student of fine arts in general, but also by means of different courses of study to equip its students for any special line of artistic work which they may desire to follow.

The Art Department offers two Courses leading to graduation for persons who wish to take the Art Course for culture, or for teaching, or for future work.

The Courses as outlined below offer the foundation for fine arts such as are found in the leading art schools of the country, and serve to cultivate appreciation of art and develop definite ability of execution.

The first year of the Fine Arts Course serves as a preparation for all branches taught in the school. The Course is so arranged that the student through steady progress may develop the power to represent objects faithfully, learn their forms and aspects, and at the same time acquire equal facility in the handling of all required mediums.

Note books of history of art and historic ornament must be submitted and examinations in perspective, history of art and historic ornament successfully passed to secure promotion.

Those completing the required work of the class will receive a diploma.

The Illustration Course is outlined especially for persons desiring to study illustration as a special line, and much time is devoted to original composition.

Special lectures are given to the classes in composition wherein the pupils of both Courses present work executed outside of the studio of special subjects rendered, and receive individual criticism. This serves to develop originality, rhythm, harmony, and expression.

Special Courses are varied to suit the requirements of different pupils, when the amount of time for work in studio is limited.

I. FINE ARTS COURSE.

FIRST YEAR.

Drawing—Geometric, still life and drapery and the antique, principles of perspective, proportion light and shade, plant analysis, nature study, historic ornament and design.

Theory of color, color matching and color harmony, thin oils, preparatory to water color.

Lectures—Composition.

SECOND YEAR.

Drawing—Antique and portrait.

Outdoor Sketching.

Mediums—Water colors, oils, and charcoal.

History of Art.

Botany.

Lecture—Composition.

THIRD YEAR.

Drawing—Portrait and human figure, anatomy, outdoor sketching.

Mediums—Water color, oils, and charcoal.

Modeling—Human figure in clay.

Forestry.

Lecture—Composition.

II. ILLUSTRATION COURSE.

Students making a specialty of illustration and who have not had sufficient previous training in drawing to be eligible for the portrait or life class, work with the first year class of the Fine Arts Course until ready for promotion.

The purpose of the class in illustration is to so instruct the students that they will be able to enter the professional field of magazine and book illustrating, costumes, and decorative work.

Those completing the Course as described will receive a diploma.

FIRST YEAR.

Drawing—Antique, portrait, human figure, perspective, proportion, and light and shade.

Mediums—Charcoal, pastels, pencil, pen and ink, water color and oils.

Lectures—Composition.

Botany.

History of Art.

Historic Ornament.

SECOND YEAR.

Drawing—Portrait and human figure.

Costume Designs.

Lectures—Composition.

Forestry.

III. SPECIAL COURSES.

CLASS A—ARTS AND CRAFTS.

All work is based on original design, using geometric, historic, and floral motifs in oil cloth, linoleums, dress prints, wall paper, rugs, tiles, laces, embroideries, menu and place cards, including stencils, cut and tooled leather, pierced and hammered metal, basketry in raffia and reed work, and weaving.

The purpose of this Course is to provide a course in culture for persons who want to devote shorter hours to the work. Pupils who are taking college work and have one or two hours to devote to art work are permitted to enroll under Special Course. Such students may select from the Course such work as they can do.

Theory of color, color matching, color harmony and design.

Sketches from historic ornament.

Mechanical drawing.

History of Art.

Appreciation of Pictures.

CLASS B—KERAMICS.

All work is based on original design.

Pottery.

China decorating, conventional and naturalistic treatment.

History of Keramics and their various styles.
Theory of Color—Color matching and color harmony.
Practical instruction in managing the kiln.

CLASS C—HOUSEHOLD ARTS.

It is the purpose of the Course to take up the study of home development from primitive times to our present-day homes. Plans for homes, in sketch from which one is to be selected, as to appropriate furnishings for various rooms, including wall coverings, draperies and furniture.

Domestic Architecture.

History of Art.

Historic Ornament.

Appreciation of Pictures.

Picture Hanging.

Theory of color, color matching and color harmony.

Artistic table decorations executed in water color, with menu and place cards, candle shades and original designs for embroidery articles for the home, according to the laws of color harmony.

CLASS D—PUBLIC SCHOOL DRAWING.

The purpose of the class is to prepare students for teaching drawing in public schools, or to supervise over the drawing therein.

This Course coöperates with the Course described for the supervisors in public school music, and programs are arranged for the students in order to avoid conflicts.

The first year is devoted almost entirely to drawing as a foundation for the future work, including perspective, historic ornament, history of art, appreciation of pictures, and school room decoration, together with construction work and the making of plates to be used at some future time in connection with teaching in the grades. The second year is devoted to preparation of lesson for practice teaching, and the actual practice in conducting the classes.

It is unusual for students in art schools to be so situated that they may enjoy college life at the same time. Life in the resident wellings brings them in contact with college people, and does away with the inconvenience of boarding houses.

The Art students are subject to the rules of the College, and enjoy the same privileges as the college students.

Students taking a full course in the Art Department are permitted to continue one college subject without extra charge.

ART EXHIBIT.

On Saturday, Monday and Tuesday of Commencement week, a display of art products by the pupils of the School of Art is made in the Studio. At this time a committee of Art students receives and entertains all those who visit the Studio.

TUITION FEES.

Per Term.

Fine Arts Course.....	\$15.00
Illustration Course	15.00
Special Courses	12.00

Special individual instruction in painting \$1.00 per lesson.

All bills must be paid to the Registrar of the University within the first ten days of each term.

Graduates will be charged the usual fee for their diplomas.

School hours for the Fine Arts Course and Illustration Course are from 9 A. M. until 4 P. M. every day except Saturdays.

Studios pupils are allowed to continue for practice on Saturday mornings, by special permission from the instructor.

Pupils may enter the school at the beginning of any term during the year. No previous knowledge of drawing is required.

Each student must submit all work for exhibition. Punctuality in attendance is required.

All work selected by the judges must remain on exhibition until permission is given for its removal.

Each graduate is expected to present at least one piece of work, selected by the judges, to the school which is to remain on permanent exhibition.

NAMES OF STUDENTS.

NAME.	RESIDENCE.
MARTHA ESTHER ACHENBACH,	Reading
GRACE ELEANOR AMES,	Milton
NELLIE WOLFE AUMILLER,	Lewisburg
JEAN G. BARBER,	Belleville
SARA GRAY BARNITZ,	Mifflinburg
ADALINE ELIZABETH BERNHART,	Lewisburg
MIRIAM NEFF BRIDGE,	Jersey Shore
FLORENCE MAE DERSHEIMER,	Tunkhannock
HILDA ELIZABETH DINTERMAN,	Spring Grove
MARGARET DOLPHIN,	Kane
ESTHER CAVIN EDGE,	Jeanette
MABEL ALICE EDEE,	Balston Spa, N. Y.
GAIL MYRA FELTON,	Connellsville
ETHEL MARY FELTON,	Connellsville
HAYDEE FRANCIS,	Taylor
MARY EDNA GROVE,	West Milton
ANNA MARY HARRIS,	Susquehanna
FRANCES MAY HILGERT,	Nicholson
KARTHRYN B. HOFF,	Reading
CATHRYNE BLANCHE JENKINS,	Milton
MARY E. JOHNSON,	Lewisburg
MILDRED ELIZABETH JORDAN,	Athens
JULIA SOPHIA KARMILOWICZ,	Kingston
ELIZABETH MOUNCE KATES,	Willow Grove
NAOMI B. LANE,	Lane's Mills
JENNIE FOLLMER McLAUGHLIN,	Lewisburg
MARGARET SALOME McLAUGHLIN,	West Newton
MARY MATILDA McLAUGHLIN,	West Newton
MARY MILLS McLEOD,	Oil City
GWLDADYS RUTH MORGAN,	Franklin
RUTH B. MOHN,	Lewisburg
MARGARET IHMSEN SIBLE,	Mountain Dale
THELORA THELMA SMITH,	Milton
MARGUERITE WATSON TAGGART,	Watsontown
FLORENCE EDITH TUTTLE,	Port Allegany
MAUDE IRENE WITHERSON,	Houtzdale
FLORENCE VAN BLAIRCOM YOUNGS,	Blooming Grove, N. Y.
Total Number, 37.	

IV. DOMESTIC SCIENCE.

FACULTY.

MISS ANNA ROBERTA CAREY, A.M.,
PSYCHOLOGY AND HYGIENE.

MISS ROSE ELIZABETH RAINEY (Drexel Institute),
COOKING.

MISS MARY CLAYTON (Columbia University),
COOKING AND SEWING.

NELSON FITHIAN DAVIS, SC.D.,
BIOLOGY AND BACTERIOLOGY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
CHEMISTRY.

WILLIAM GUNDY OWENS, A.M.,
CHEMISTRY OF FOODS.

LEO GUIDO CARL RIEMER, PH.D.,
FRENCH.

Students in Domestic Science are of College rank and their names are given in the catalog of College students.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To prosecute the work of this Course effectively, the student should have the equivalent of the usual four-year High School Course.

This Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

A complete laboratory has recently been fitted up at large expense for the use of the Domestic Science Department, fully equipped for practical instruction in the several lines offered.

PSYCHOLOGY.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Comparative Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Child Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology are open as electives to College women.

PHYSIOLOGY.

The Course in Physiology, with special reference to Domestic Science, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on.

CHEMISTRY.

Descriptive Chemistry is taught by text-books, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the student.

1. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4. Chemistry of Foods. Food analysis is practiced in the laboratory, six hours a week. Full College Course. Prerequisites, Courses 1, 2 and 3.

CONSPECTUS OF THE COURSE.

FIRST YEAR.

I. TERM—Chemistry, 5,	Thesis,
General Psychology, 5,	Physical Training, 2,
Cookery { Principles, 1,	Sewing, 2.
{ Practice, 5,	

- II. TERM—Chemistry, 5,
 Personal Hygiene, 5,
 Cookery { Principles, 1,
 Practice, 5,
- Thesis,
 Physical Training, 2,
 Mechanical Drawing, 1,
 Sewing, 2.

- III. TERM—Chemistry, 5,
 Home Nursing and Emer-
 gencies, 5,
 Cookery { Principles, 1,
 Practice, 4,
- Thesis,
 Physical Training, 2,
 Domestic Architecture, 1,
 Sewing, 2.

SECOND YEAR.

- I. TERM—Chemistry of Foods, 5,
 Biology, 5,
 Cookery { Principles, 1,
 Practice, 4,
 French, 5,
- Thesis,
 Physical Training, 2,
 Methods of Teaching Do-
 mestic Science, 1.

- II. TERM—French, 5,
 Rhetoric, 5,
 Cookery, 5,
 Dietetics and Domestic Sani-
 tation, 5,
- Thesis,
 Physical Training, 2,
 Invalid Cookery, 1,
 Methods of Teaching, 1.

- III. TERM—Cookery, 5,
 Bacteriology, 5,
 Child Psychology, 5,
 French, 5,
- Thesis,
 Methods of Teaching, 1,
 Household Manage-
 ment, 2.

Certificates of graduation are granted to students who complete the Domestic Science Course.

SUMMARY OF ATTENDANCE.

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GENERAL INFORMATION.

ADVANTAGES.

The Bucknell Institute offers superior educational advantages. Its location in a University town assures an atmosphere of study and the benefit of numerous literary exercises, lectures, and addresses. The students residing in the Institute have the use of the Library and apparatus of the Institute, and also of the College, Astronomical Observatory, Chemical Laboratory, Museum and Library, and the various apparatus of the University. An isolated school could not provide for itself these advantages at a cost of less than a quarter of a million dollars.

During the year 1905 about forty thousand dollars were expended in enlarging and improving the women's buildings.

ADMINISTRATIVE AND OTHER REGULATIONS.

1. The general control of the Women's College, Institute, and School of Music is vested in the President of the University.
2. The government of the Institute, subject to such control, rests with the Dean.
3. Young women, whether attending the College or School of Music, are subject to the rules and regulations governing young women attending the Women's College.

RULES.

The laws governing the Women's College are enacted by the Board of Trustees and a copy is given to each student when she enters the Institution.

Any officer of the Institute becoming cognizant of violation of regulations by any pupil shall report the same to the Dean, who shall make a record of the fact in a book provided for the purpose. Any second violation by the same pupil shall be reported to the President of the University; and, if, in the judgment of the President of the University and the Dean, the offense be of sufficient gravity, the parent or guardian of the offending pupil shall be notified.

Violations of the regulations of the Women's College or infraction of the laws of good conduct are punished by private reprimand, deprivation of privileges, or private withdrawal from the Institution.

Summary punishment may be inflicted whenever the interests of the Institution demand it.

PHYSICAL CULTURE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Institute Gymnasium is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Institute Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

Two hours a week in the Gymnasium during the winter term is required for all resident students, Juniors and Seniors of college excepted. No student will be excused from the required exercise except by order of the Director of Gymnastics. Special exercises are prescribed for students needing individual corrective work.

Every student while exercising in the Gymnasium must wear a gymnasium suit of the pattern prescribed by the Director.

TEACHERS' COURSE IN PHYSICAL CULTURE.

Swedish gymnastics, æsthetic gymnastics, light apparatus drill, playground work and games are taught. Lectures on health and hygiene are given throughout the year.

ÆSTHETIC CULTURE.

It is intended that the pupils of the Institute shall have the influence unconsciously received from painting, music, and refined surroundings, as well as direct instruction in Literature, Music, and Art. Special instruction in Music and Art is given in the schools devoted to those subjects.

SOCIAL CULTURE.

Pupils are trained to observe the usages of good society. Meetings of various organizations for improvement in Literature, Music, and Art and receptions in charge of the pupils add variety to student life. No effort is spared to give the pupils the advantages of a cultured home. The purpose is to develop the social life of the Institution within itself. Students are not permitted, during term-time, to visit in neighboring towns. The number of social functions during the term is limited, and the consent of the Dean must be obtained for each function at least one month before it is to occur.

RELIGIOUS EDUCATION.

The Institute is distinctly Christian in its influence. Morning and evening Chapel in the Hall of the Institute building is attended by all students in the Institute Courses, special students, and women pursuing studies in the School of Music. College women living in the Institute attend evening Chapel.

Attendance upon Sabbath school and church services in town is required. All students have weekly recitations in Inductive Bible Study. The students have organized several classes for Scripture Study.

The Young Women's Christian Association, a voluntary society open to the officers and students of the Institute, meets weekly. The regular Tuesday evening prayer-meeting, missionary and temperance work, special Bible Classes, are in charge of this Association.

PRIZES.

1. The first Senior Essay Prize was awarded, 1915, to Elizabeth Ward Stephens.
2. The Senior Scholarship Prize was awarded, 1915, to Elizabeth Ward Stephens.

EXPENSES OF STUDENTS IN WOMEN'S COLLEGE.

I. Boarding Students. The regular charge for Boarding Students in College Courses and Domestic Science Course, is \$325.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

This does not include the personal laundry of the student.

For the rooms in the Bucknell Cottage and in New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students in College Courses and in Domestic Science Course is \$140.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing and Painting, and Music will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence on account of sickness.

The expenses for Music, Printing, and other charges ordinarily incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$10.00.

Free scholarships, covering tuition, are awarded to children of Ministers of the Gospel *in actual service*.

Tuition is rated at \$50.00 per annum.

UNIVERSITY CALENDAR.

1916.

SPRING RECESS.

Second Term Ends,.....	Wednesday, March 22
Third Term Begins,.....	Wednesday, March 29
Sermon before the Christian Association,.....	Sunday, April 9
Declamation of the Third Form, Academy,.....	Saturday, April 15
Contest in Elocution,.....	Saturday, May 6
Exhibition of the Junior Class, College,.....	Friday, May 12
Examinations,.....	Tuesday to Friday, June 16
Exhibition, School of Music,.....	Friday, June 16
Baccalaureate Sermon,.....	Sunday, June 18
Sermon before the Education Society,.....	Sunday, June 18
Examinations for Admission to College,.....	Monday, June 19
Meeting of the Alumnæ,.....	Tuesday, June 20
Annual Meeting of the Trustees,.....	Tuesday, June 20
Annual Meeting of the Alumni,.....	Tuesday, June 20
Graduation of the Fourth Form, Academy,.....	Tuesday, June 20
Graduating Exercises of the Institute,.....	Tuesday, June 20
Oration before the Alumni,.....	Tuesday, June 20
ANNUAL COMMENCEMENT, the 66th,.....	Wednesday, June 21

SUMMER VACATION.

Fall Examinations for Admission to College,	Wednesday, September 20
First Term Begins,.....	Thursday, September 21
Election of Class Officers, 3 p. m.,.....	Friday, September 22
Reception by Christian Association,.....	Saturday, September 23
Matriculation, ...	Tuesday, November 28
Thanksgiving (recess of three days),.....	Thursday, November 30
First Term Ends,.....	Wednesday, December 20

1917.

Second Term Begins,.....	Wednesday, January 3
Second Term Ends,.....	Wednesday, March 21
Third Term Begins,.....	Wednesday, March 28

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SIXTEENTH SERIES

JANUARY, 1917

No. 4



CATALOG

1916-1917



THE

SIXTY-SEVENTH CATALOG

OF THE

OFFICERS AND STUDENTS

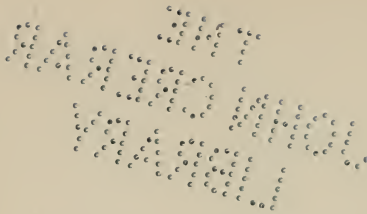
OF

Bucknell University:

COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1916-1917

82



CALENDAR.

The Winter Term Ends.....Wednesday, March 21, 1917
The Spring Term Begins....Wednesday, March 28, 1917
Annual Commencement Wednesday, June 20, 1917
Summer Schools Begins.....Monday, July 2, 1917
The Fall Term Begins ...Thursday, September 20, 1917
The Fall Term Ends Wednesday, December 19, 1917
The Winter Term Begins.....Thursday, January 3, 1918

BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one million dollars. The productive investment amounts to over eight hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIET BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE, LOUISE BUCKNELL LITTLE.

PATRONS (those who have given one thousand dol-

lars or more, but less than ten thousand) have been: CHARLES F. ABBOTT, RALPH A. AMERMAN, E. A. ARMSTRONG, FRANCIS W. AYER, BENJAMIN BEAR, WILLIAM P. BEAVER, MARTIN BELL, EMMA W. BUCKNELL, WASHINGTON BUTCHER, SIMON CAMERON, LEVI B. CHRIST, ELISHA A. CORAY, WILLIAM J. COXEY, NETTIE DUNHAM CRARY, SAMUEL J. CRESWELL, GEORGE K. CROZER, J. LEWIS CROZER, MRS. J. LEWIS CROZER, ROBERT H. CROZER, JOHN C. DAVIS, THOMAS Y. ENGLAND, ISAAC FORD, MRS. ISAAC FORD, BENJAMIN GARTSIDE, MARY W. GETTER, THOMAS A. GILL, LEROY GLEASON, CALVIN GREEN, BENJAMIN GRIFFITH, CALVIN A. HARE, JOHN H. HARRIS, GEORGE HYDE, JAMES IRVING, ISRAEL JAMES, E. C. JAYNE, ADAM JOHNSTON, JOHN D. JOHNSON, WILLIAM W. KEEN, WILLIAM B. LEAS, ALEXANDER M. LLOYD, JUSTIN R. LOOMIS, FREEMAN LOOMIS, WILLIAM H. LUDWIG, J. C. MCKINNY, S. E. MCVITTY, JOSEPH MEIXELL, GEORGE BARRON MILLER, GEORGE F. MILLER, JAMES MOORE, JAMES MOORE, JR., H. J. MULFORD, JACOB G. NEAFIE, CHRISTIAN OVERHOLT, A. C. OVERHOLT, MARIA OVERHOLT, GEORGE PORTER, JACOB REESE, A. J. ROWLAND, J. C. SIBLEY, GEORGE M. SPRATT, ORLANDO W. SPRATT, W. H. STARBUCK, AMOS B. STILL, JAMES B. STEPHENSON, JOHN B. STETSON, JAMES S. SWARTZ, FRANCIS J. TORRANCE, ERNEST L. TUSTIN, N. STEWART WALL, CHARLES S. WALTON, MARTHA ENGLAND WALTON, THOMAS WATTSON, JOSEPH K. WEAVER, SAMUEL WOLF, SIMON P. WOLVERTON, S. D. YOUNG.

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalog of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees has authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the Loan Fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large active loan fund accumulates.

(f) A fund for the Retirement of Professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose: .

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever

CONDITIONAL GIFTS.

Gifts will be accepted by the University conditional upon the payment of an annuity to the donor during life

ORGANIZATION.

I. THE COLLEGE offers ten Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence and Finance.
4. The Course in General Science.
5. The Course in Domestic Science.
6. The Course in Biology.
7. The Course in Chemical Engineering.
8. The Course in Civil Engineering.
9. The Course in Electrical Engineering.
10. The Course in Mechanical Engineering.

II. THE DEPARTMENT OF MUSIC has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

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*CHARLES S. WALTON, A.M.

JOSEPH K. WEAVER, A.M., M.D.

S. LEWIS ZIEGLER, M.D., LL.D.

MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January in Philadelphia.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION.

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DAVID PORTER LEAS, A.M.	MILTON G. EVANS, D.D.
AND THE PRESIDENT.	

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, Museum of Natural History and Recitation rooms.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms, and for recitation rooms and offices.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Association, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE FIRST BUILDING.

The First Building on College Hill, erected in 1846, is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Registrar's private office; on the second floor are suites of rooms for the Registrar and his family and for the Matron. The third floor is used for a Laboratory of Biology.

V. BUCKNELL COTTAGE FOR MEN.

The Bucknell Cottage for men is contiguous to the First Building and is connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet in width, and is finished in natural wood. The building contains a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

VI. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College, in which the students of the College meet for worship.

VII. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D.C.L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred thousand volumes.

VIII. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteen wire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

IX. THE CHEMICAL LABORATORY.

The Laboratory is forty-three feet in width and eighty-six feet in length, with two stories above the basement.

In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Analysis; the basement has rooms for Applied Chemistry, and a fireproof room. The attic contains a room for dissection in Human Anatomy.

X. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the heating and lighting plant of the institution; the main story, with one room twenty by fifty and another forty by forty-five, is used for shop work.

XI. THE FOUNDRY.

The Foundry, erected in 1915, is a building of brick, fitted up with all appliances requisite for the courses in molding and casting.

XII. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the room. At the height of twelve feet a running-track gallery, six feet wide, surrounds the room.

XIII. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor

sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XIV. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College and in the School of Music.

1. **The Main Building** contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, recitation rooms, and a dining hall; on the second floor a schoolroom and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. **The South Hall**, erected in 1869, is devoted to students' rooms, except the third story, which is used as a Laboratory for the department of Domestic Science.

3. **The Bucknell Cottage** stands to the southwest of the Main Building, and is connected with it by an enclosed passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and closets on either side. In this building is the **Studio**, a

spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. **New Cottage** for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The Calisthenium occupies the upper story, and has a floor surface of over four thousand feet.

5. **The Annex.** An additional residence building has been secured which accommodates twenty College women.

6. **The Campus** of the Women's College is separated from the main College grounds by Loomis Street.

XV. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XVI. THE PRESIDENT'S HOUSE.

The Corporation owns a house for the use of the President of the University.

THE COLLEGE

THE FACULTY.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

FRANK ERNEST ROCKWOOD, LL.D.,
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DEAN OF THE DEPARTMENT FOR WOMEN.

NELSON FITHIAN DAVIS, SC.D.,
DEAN OF THE SUMMER SCHOOL.

ENOCH PERRINE, LITT.D.,
SECRETARY OF THE FACULTY.

WILLIAM EMMET MARTIN, A.M., LL.D.,
LIBRARIAN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR OF THE UNIVERSITY.

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EDGAR CARLTON CAMPBELL, A.B.,

INSTRUCTOR IN FRENCH.

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LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,

PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,

LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,

ATTORNEY-AT-LAW,

LECTURER ON BILLS AND NOTES AND ON AGENCY.

THOMAS WOOD, A.M., LL.B.,

LECTURER ON REAL PROPERTY.

ADMISSION OF STUDENTS

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

Three of these units are equal to one Carnegie unit.

I. GENERAL REQUIREMENTS.

Candidates for admission to any of the Courses must pass examination in the following:

1. ENGLISH (nine units).

- a. Writing from dictation.
- b. English Grammar.
- c. Elements of Rhetoric—Invention, Style, and Punctuation.
- d. A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. **Reading.**—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple

questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics (three units); or Chemistry (three units).

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the Æneid.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the Æneid.
2. SOLID GEOMETRY (one unit).
3. Any eight units selected from group E.

C. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. SOLID GEOMETRY (one unit).
3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the Course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN, FRENCH, or SPANISH.

The Grammar of the Language, Composition and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the College Entrance Examination Board are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the

Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismissal. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his deportment that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismissal given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismissal be granted to any student who has not discharged all his pecuniary obligations to the Institution. No papers of dismissal or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismissal are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers ten Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of which extends through two years of the Course and the latter through four years, and also twelve lecture courses.

Only major subjects taken in class are accepted for the Bachelor's degree.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three courses in German, French or Spanish.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four courses of German, French, or Spanish, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College courses in either of the Ancient Classical languages or nine College courses in English, German, or French in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The Course in Jurisprudence is designed for persons preparing for the legal profession, for a business career, and for participation in public affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or French for admission and at least four courses of college work in German, French, or Spanish as requisites for graduation.

V. The Course in General Science, Domestic Science Division, leading to the degree of Bachelor of Science, covers four years of work in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science, together with other subjects important to a liberal education.

VI. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VII. The Course in Chemical Engineering, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Engineering if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VIII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

IX. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

X. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

XI. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

THE SUB-FRESHMAN CLASS.

The sub-freshman class is designed to fit young men or women to enter any of the Courses in College. Graduates of High Schools with two or with three years' Courses or their equivalents, are admitted and assigned to such work as will enable them to enter with advantage upon college studies.

Classes are formed at the beginning of the scholastic year in such subjects as may be required in Greek, Latin, Mathematics, and Science. Fuller information may be obtained from the Registrar.

DOMESTIC SCIENCE.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bateriaology, and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy, and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To enter upon this Course, the student must have the usual four-year High School Course.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

The Course in Domestic Science is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE,

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

I. TERM—Solid Geometry,	Rhetoric, I,
Cicero de Seneetute and Livy,	Oratory, I.
{ Odyssey,	
{ Greek Prose, Composition,	

II. TERM—Higher Algebra,	Rhetoric, I,
Livy,	Oratory, I.
Lysias' Orations,	

III. TERM—Trigonometry,	Rhetoric, I,
Cicero de Officiis,	Oratory, I.
Plato's Apology,	

SOPHOMORE YEAR.

I. TERM—English Literature,	Astronomy, I, or
Horace,	History of Art, I,
Oratory, I.	

ELECTIVE STUDIES:

German,	American History, a,
French,	Chemistry,
Spanish,	Surveying,
Greek History,	Analytical Geometry.

- II. TERM—Rhetoric, Demosthenes, Astronomy, I, or History of Art, I, Oratory, I.

ELECTIVE STUDIES:

<i>Roman History,</i>	<i>Spanish,</i>
<i>American History, b,</i>	<i>Logic,</i>
<i>Latin, 6,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Differential Calculus,</i>
<i>French,</i>	<i>Advanced Algebra,</i>
<i>Physiology.</i>	

- III. TERM—Civics, or Economic History, History of Art, I, or
or Constitutional Law, South America, I.

ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Spanish,</i>
<i>Argumentation,</i>	<i>Anthropology,</i>
<i>American Literature,</i>	<i>Botany,</i>
<i>Juvenal,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Integral Calculus,</i>
<i>French,</i>	<i>Elements of Law,</i>
<i>Child Psychology.</i>	

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>Sociology,</i>
<i>Latin, 8,</i>	<i>History of Education, a,</i>
<i>English, 6 or 7,</i>	<i>Teachers' Mathematics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Entomology,</i>
<i>Economics,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>Constitutional Law,</i>	<i>Geology.</i>

- II. TERM { Ethics, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Comparative Psychology,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>Journalism,</i>	<i>Animal Histology, a,</i>
<i>German,</i>	<i>Human Anatomy, a,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>English Bible,</i>	<i>Higher Analytics,</i>
<i>History, English, a,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Physics,</i>
<i>Money and Banking,</i>	<i>Municipal Government,</i>
<i>Contracts,</i>	<i>History of Education, b.</i>

III. TERM—History of Philosophy, Religious Education, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Latin, 10,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Psychology of Education,</i>	<i>Physics.</i>

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Principles of Education.</i>
<i>Latin, 11,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Geology,</i>
<i>French,</i>	<i>Geodetic Astronomy,</i>
<i>Medieval History,</i>	<i>Personal Property,</i>
<i>Advanced Ethics.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Philosophy of Mind,</i>
<i>Latin, 12,</i>	<i>History, 11,</i>
<i>Roman Life,</i>	<i>History of Europe, a,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Theories of Education,</i>	<i>Economic Geology,</i>
<i>Agency,</i>	<i>Human Anatomy, b.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>History of Europe, b,</i>
<i>Greek Testament,</i>	<i>Private Corporations,</i>
<i>Latin, 13,</i>	<i>Roman Law,</i>
<i>German,</i>	<i>Bills and Notes,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Shakspeare,</i>	<i>Forestry,</i>
<i>History of Philosophy,</i>	<i>Railroad Transportation,</i>
<i>Secondary Education,</i>	<i>Advanced Composition.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

I. TERM—Higher Algebra,	Rhetoric, I,
Cicero de Senectute and Livy,	Oratory, I.
German or French or Spanish,	

II. TERM—Trigonometry,	Rhetoric, I,
Livy,	Oratory, I.
German or French or Spanish,	

- III. TERM—Cicero de Officiis, Rhetoric, I,
 Analytical Geometry, Oratory, I.
 or Astronomy,
German or French or Spanish,

SOPHOMORE YEAR.

- I. TERM—English Literature, Astronomy, I, or
 Horace, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, *American History a,*
French, *Chemistry,*
Greek History, *Surveying.*
Analytics.

- II. TERM—Rhetoric, Astronomy, I, or
 Oratory, I, History of Art, I.

ELECTIVE STUDIES:

Roman History, *Physiology,*
American History, b, *Chemistry,*
Latin, 6, *Differential Calculus,*
German, *Advanced Algebra,*
French, *Logic.*

- III. TERM—Civics or Economic History, History of Art, I, or
 or Constitutional Law, South America, I.

ELECTIVE STUDIES:

Argumentation, *Anthropology,*
Public Address, *Elementary Law,*
American Literature, *Botany,*
Juvenal, *Chemistry,*
German, *Integral Calculus,*
French, *Child Psychology.*

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 { Thesis,

ELECTIVE STUDIES:

<i>Latin, 8,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Entomology,</i>
<i>English, 6 or 7,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>Sociology,</i>	<i>History of Education, a,</i>
<i>Constitutional Law,</i>	<i>Teachers' Mathematics.</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Contracts,</i>
<i>English, 8,</i>	<i>Advanced Logic,</i>
<i>Journalism,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>History of Education, b.</i>	

III. TERM—History of Philosophy,	Religious Education, J
	Thesis.

ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Cryptogamic Botany,</i>	<i>Physics,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

II. TERM {	Social Ethics, I,
	Thesis.

ELECTIVE STUDIES:

<i>Latin</i> , 11,	<i>Principles of Education</i> ,
<i>German</i> ,	<i>International Law</i> ,
<i>French</i> ,	<i>Personal Property</i> ,
<i>Anglo-Saxon</i> ,	<i>Comparative Anatomy</i> ,
<i>English</i> , 4 or 9,	<i>Chemistry</i> ,
<i>Medieval History</i> ,	<i>Geology</i> ,
<i>Advanced Ethics</i> ,	<i>Geodetic Astronomy</i> .

II. TERM { *Political Ethics*, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin</i> , 12,	<i>Roman Private Life</i> ,
<i>Chaucer</i> ,	<i>Comparative Politics</i> ,
<i>German</i> ,	<i>Public Finance</i> ,
<i>French</i> ,	<i>Chemistry</i> ,
<i>History of Europe</i> , a,	<i>Economic Geology</i> ,
<i>Philosophy of Mind</i> ,	<i>Human Anatomy</i> , b,
<i>Theories of Education</i> ,	<i>Agency</i> .

III. TERM—*Literature*, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Latin</i> , 13,	<i>Secondary Education</i> ,
<i>German</i> ,	<i>Roman Law</i> ,
<i>French</i> ,	<i>Private Corporations</i> ,
<i>Shakspeare</i> ,	<i>Chemistry</i> ,
<i>History of Philosophy</i> ,	<i>Forestry</i> ,
<i>History of Europe</i> , b,	<i>Railroad Transportation</i> ,
<i>Bills and Notes</i> ,	<i>Advanced Composition</i> .

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

I. TERM—*Higher Algebra*, *Rhetoric*, I,
Odyssey, *Oratory*, I.
German or French or Spanish,

II. TERM—Trigonometry, Rhetoric, I,
 Lysias' Orations, Oratory, I.
German or French or Spanish,

III. TERM—Analytical Geometry Rhetoric, I,
 or Astronomy, Oratory, I.
 Plato's Apology,
German or French or Spanish,

SOPHOMORE YEAR.

I. TERM—English Literature, Astronomy, I, or
 Greek History, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

American History, a, French,
German, Chemistry,
Surveying.

II. TERM—Rhetoric, Astronomy, I, or
 Demosthenes, History of Art, I.
 Oratory, I.

ELECTIVE STUDIES:

German, Logic,
French, Physiology,
Roman History, Chemistry,
American History, b, Differential Calculus,
Advanced Algebra.

III. TERM—Civics or Economic History, History of Art, I, or
 or Constitutional Law, South America, I.

ELECTIVE STUDIES:

Argumentation, Integral Calculus,
Public Address, Elements of Law,
American Literature, Botany,
German, Anthropology,
French, Chemistry,
Child Psychology.

JUNIOR YEAR.

I. TERM { Psychology, Sanitary Science, I.
 Thesis,

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>History of Education, a,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English Bible,</i>	<i>Biology,</i>
<i>English, 6 or 7,</i>	<i>Entomology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Sociology,</i>	<i>Mechanics,</i>
<i>Constitutional Law,</i>	<i>Teachers' Mathematics.</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Municipal Sociology,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>History of Education, b,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>Journalism,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English,</i>	<i>Chemistry,</i>
<i>Money and Banking,</i>	<i>Mathematics, 9,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Advanced Logic,</i>	<i>Higher Analytics,</i>
<i>Contracts.</i>	

III. TERM.—History of Philosophy,	Religious Education, I,
	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, 6,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Zoölogy of Vertebrates,</i>	<i>Physics,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

- I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Advanced Ethics,</i>
<i>Anglo-Saxon,</i>	<i>Principles of Education,</i>
<i>English, 4 or 9,</i>	<i>International Law,</i>
<i>German,</i>	<i>Personal Property,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Geology.</i>	

- II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Theories of Education,</i>
<i>Chaucer,</i>	<i>Roman Life,</i>
<i>German,</i>	<i>Comparative Politics,</i>
<i>French,</i>	<i>Public Finance,</i>
<i>Philosophy of Mind,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Agency,</i>	<i>Human Anatomy, b.</i>

- III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Secondary Education,</i>
<i>Greek Testament,</i>	<i>Bills and Notes,</i>
<i>French,</i>	<i>History of Europe, b,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
<i>Advanced Composition.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
 { Odyssey,
 { Greek Prose Composition,
 or German,
 or French,
 or Spanish,
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
 Lysias' Orations,
 or German, or French,
 or Spanish,
- III. TERM—Civics, Rhetoric, I,
 Cicero de Officiis, Oratory, I.
 Plato's Apology,
 or German,
 or French,
 or Spanish,

SOPHOMORE YEAR.

- I. TERM—English Literature, Political Science, I,
 Horace, Oratory, I.

ELECTIVE STUDIES:

Greek History, *Surveying,*
American History, a, *Chemistry.*
French,
German,

- II. TERM—Rhetoric, Political Science, I,
 Logic, Oratory, I.

ELECTIVE STUDIES:

<i>Demosthenes,</i>	<i>American History, b,</i>
<i>Quintilian,</i>	<i>German,</i>
<i>Roman History,</i>	<i>French.</i>

III. TERM—Elements of Law,	Political Science, I.
Constitutional Law,	

ELECTIVE STUDIES:

<i>Juvenal,</i>	<i>American Literature,</i>
<i>German,</i>	<i>Argumentation,</i>
<i>French,</i>	<i>Public Address,</i>
<i>Economic History,</i>	<i>Child Psychology.</i>

JUNIOR YEAR.

I. TERM—Psychology,	Blackstone, I,
Economics,	Thesis.

ELECTIVE STUDIES:

<i>Real Property, Blackstone B. II,</i>	<i>English Bible,</i>
<i>English History,</i>	<i>Latin, 8,</i>
<i>Sociology,</i>	<i>Greek Tragedy,</i>
<i>History of Education, a,</i>	<i>English Literature,</i>
<i>Modern Language.</i>	

II. TERM—Ethics,	Blackstone, I,
Money and Banking,	Thesis.

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Modern Language,</i>	<i>Journalism,</i>
<i>History of Education, b.</i>	

III. TERM—History of Philosophy,	Blackstone, I,
Private Corporations,	Thesis.

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

- I. TERM—International Law, { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Personal Property,</i>	<i>Latin, 11,</i>
<i>Medieval History,</i>	<i>Modern Language,</i>
<i>Anglo-Saxon,</i>	<i>Advanced Ethics,</i>
<i>English Literature,</i>	<i>Principles of Education.</i>

- II. TERM—Comparative Politics, { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Agency,</i>	<i>Demosthenes de Corona,</i>
<i>Public Finance,</i>	<i>Latin, 12,</i>
<i>Modern Europe, a,</i>	<i>Chaucer,</i>
<i>Philosophy of Mind,</i>	<i>Modern Language,</i>
<i>Theories of Education.</i>	

- III. TERM—Roman Law. Literature, I.

ELECTIVE STUDIES:

<i>Bills and Notes,</i>	<i>Plato's Phaedo,</i>
<i>Railroad Transportation,</i>	<i>Latin, 13,</i>
<i>Modern Europe, b,</i>	<i>Modern Language,</i>
<i>History, 9,</i>	<i>Secondary Education,</i>
<i>Shakspeare,</i>	<i>Advanced Composition, a.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

IV. THE GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

- | | |
|-------------------------|--------------|
| I. TERM—Higher Algebra, | Rhetoric, I, |
| Latin, | Oratory, I. |
| German or French, | |
| or Spanish, | |

II. TERM—Trigonometry,
Latin,
German or French,
or *Spanish,*

Rhetoric, I,
Oratory, I.

III. TERM—Analytical Geometry,
or Astronomy,
Latin,
German or French,
or *Spanish,*

Rhetoric, I,
Oratory, I.

SOPHOMORE YEAR.

I. TERM—English Literature,

Oratory, I.

Astronomy, I, or
History of Art, I,

ELECTIVE STUDIES:

Chemistry,
Horace,
German,

Greek History,
American History, a,
Surveying,

French.

II. TERM—Rhetoric,

Oratory, I.

Astronomy, I, or
History of Art, I,

ELECTIVE STUDIES:

German,
French,
Roman History,
American History, b,

Logic,
Physiology,
Chemistry,
Differential Calculus,

Advanced Algebra.

III. TERM—Civics or Economic History,
or Constitutional Law,

History of Art, I, or
South America, I.

ELECTIVE STUDIES:

Public Address,
American Literature,
Argumentation,
Juvenal,
German,
French,

Elements of Law,
Anthropology,
Botany,
Integral Calculus,
Chemistry,
Child Psychology.

JUNIOR YEAR.

I. TERM	{ Psychology, Thesis,	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Entomology,</i>
<i>Sociology,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>History of Education, a,</i>	<i>Teachers' Mathematics,</i>
<i>Constitutional Law.</i>	

II. TERM	{ Ethics, Thesis.	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>English, 8,</i>	<i>History of Education, b,</i>
<i>Journalism,</i>	<i>Contracts,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English Bible,</i>	<i>Animal Histology, a,</i>
<i>History, English,</i>	<i>Human Anatomy, a,</i>
<i>Money and Banking,</i>	<i>Chemistry,</i>
<i>Municipal Government,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Physics.</i>	

III. TERM—History of Philosophy.	Religious Education, I, Thesis.
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ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Chemistry,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Anglo-Saxon,</i>	<i>Principles of Education,</i>
<i>English, 4 or 9,</i>	<i>Advanced Ethics,</i>
<i>German,</i>	<i>International Law,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Personal Property,</i>	<i>Geology,</i>
<i>Geodetic Astronomy.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>Theories of Education,</i>
<i>French,</i>	<i>Roman Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>Philosophy of Mind,</i>	<i>Public Finance,</i>
<i>Modern Europe, a,</i>	<i>Chemistry,</i>
<i>History, 11,</i>	<i>Economic Geology,</i>
<i>Agency.</i>	

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>Secondary Education,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
<i>Advanced Composition, a.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

V. GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

B. DOMESTIC SCIENCE DIVISION.

FRESHMAN YEAR.

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|---|--|
| I. TERM.—Chemistry,
General Psychology,
French, | Cookery, IV,
Rhetoric, I,
Physical Training, II. |
| II. TERM.—Chemistry,
Personal Hygiene,
French, | Cookery, IV,
Rhetoric, I,
Physical Training, II. |
| III. TERM.—Chemistry,
{ Home Nursing,
{ Emergencies,
French, | Cookery, IV,
Rhetoric, I,
Physical Training, II. |

SOPHOMORE YEAR.

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|---|--------------|
| I. TERM.—Chemistry of Foods,
Biology,
Rhetoric, | Cookery, IV. |
| II. TERM.—Dietetics and Domestic
Sanitation,
Literature,
Physiology, | Cookery, IV. |
| III. TERM.—Child Psychology,
Botany,
Home Economics, | Cookery, IV. |

JUNIOR YEAR.

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|------------------------|--|
| I. TERM.—Bacteriology, | Sanitary Science, I,
Experimental Cookery, II,
Sewing, II. |
|------------------------|--|

ELECTIVE STUDIES:

<i>English</i> , 6 or 7,	<i>Sociology</i> ,
<i>German</i> ,	<i>Psychology</i> ,
<i>French</i> ,	<i>Physiological Psychology</i> ,
<i>Spanish</i> ,	<i>Embryology</i> ,
<i>English Bible</i> ,	<i>Entomology</i> ,
<i>History</i> , <i>Oriental</i> ,	<i>Chemistry</i> , <i>Organic</i> ,
<i>History of Education</i> , <i>a</i> .	

II. TERM—Comparative Psychology,	Sanitary Science,
	Experimental Cookery, II,
	Sewing, II.

ELECTIVE STUDIES:

<i>English</i> , 8,	<i>History</i> , <i>English</i> ,
<i>German</i> ,	<i>History of Education</i> , <i>b</i> ,
<i>French</i> ,	<i>Zoölogy of Invertebrates</i> ,
<i>Spanish</i> ,	<i>Animal Histology</i> , <i>a</i> ,
<i>English Bible</i> ,	<i>Chemistry</i> , <i>Organic</i> .

III. TERM—Commerce and Banking,	Institutional Cookery, IV,
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ELECTIVE STUDIES:

<i>German</i> ,	<i>Psychology of Education</i> ,
<i>French</i> ,	<i>Zoölogy of Vertebrates</i> ,
<i>Spanish</i> ,	<i>Cryptogamic Botany</i> ,
<i>English Bible</i> ,	<i>Histology</i> , <i>b</i> ,
<i>History of Philosophy</i> ,	<i>Chemistry</i> , <i>Organic</i> .

SENIOR YEAR.

I. TERM—Nutrition,	Social Ethics, I,
	Practice Teaching, II,
	Thesis.

ELECTIVE STUDIES:

<i>English</i> , 4, or 9,	<i>Medieval History</i> ,
<i>German</i> ,	<i>Principles of Education</i> ,
<i>French</i> ,	<i>Comparative Anatomy</i> ,
<i>Geology</i> .	

II. TERM—Household Art and
Designing,

Political Ethics, I,
Practice Teaching, I,
Invalid Cookery, II,
Thesis.

ELECTIVE STUDIES:

German,
French,
Chaucer,
Philosophy of Mind,
History of Europe, a,

History, 11,
Theories of Education,
Roman Life,
Comparative Politics,
Public Finance.

III. TERM—Secondary Education,

Demonstration Cookery,
II,
Practice Teaching, I.

ELECTIVE STUDIES:

German,
French,
Shakspeare,

History of Philosophy,
History of Europe, b,
Advanced Composition.

Seniors may take any of the Electives of the Junior Year for corresponding terms.

Students who have completed the Freshman and Sophomore Years of the Domestic Science Course may receive certificates covering the work done.

VI. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

I. TERM—Algebra,
General Chemistry,
German,
or *French*, or *Spanish*,

Rhetoric, I,
Oratory, I.

II. TERM—Trigonometry,
General Chemistry,
German,
or *French*, or *Spanish*,

Rhetoric, I,
Oratory, I.

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|--|-----------------------------|
| III. TERM—Analytical Geometry,
Qualitative Chemistry,
<i>German or French,</i>
or <i>Spanish,</i> | Rhetoric, I,
Oratory, I. |
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SOPHOMORE YEAR.

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|--|---|
| I. TERM—Rhetoric,
Biology,
Quantitative Chemistry, | Drawing, I,
Scientific German, II,
or French, II. |
| II. TERM—Invertebrate Zoölogy,
Physiology, | Drawing, I,
Scientific German, II,
or French, II. |

ELECTIVE STUDIES:

- | | |
|--|---|
| <i>History,</i>
<i>Modern Language,</i> | <i>Chemistry,</i>
<i>Differential Calculus.</i> |
| III. TERM—Vertebrate Zoölogy,
Botany, | Drawing, I,
Scientific German, II,
or French, II. |

ELECTIVE STUDIES:

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|--|--|
| <i>Chemistry,</i>
<i>Anthropology,</i>
<i>Integral Calculus,</i>
<i>Economic History,</i> | <i>Civics,</i>
<i>American Literature,</i>
<i>Modern Language,</i>
<i>Child Psychology.</i> |
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JUNIOR YEAR.

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|-----------------------------------|-------------------------------|
| I. TERM—Psychology,
Mechanics, | German Biology, I,
Thesis. |
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ELECTIVE STUDIES:

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| <i>Entomology,</i>
<i>Organic Chemistry.</i> | <i>Physiological Psychology,</i> |
| II. TERM—Comparative Psychology,
Physics, | German Biology, I,
Thesis. |

ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Organic Chemistry,</i>	<i>Human Anatomy, a.</i>

III. TERM—Neurology,	German Biology, I,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language,</i>
<i>Cryptogamic Botany.</i>	

SENIOR YEAR.

I. TERM—Comparative Anatomy,	{ Social Ethics, I,
Embryology,		Thesis.

ELECTIVE STUDIES:

<i>Geology,</i>	<i>Modern Language,</i>
<i>Economics,</i>	<i>Organic Chemistry,</i>
<i>History,</i>	<i>English Bible,</i>
<i>History of Education, a,</i>	<i>Plant Ecology.</i>

II. TERM—Histology,	{ Political Ethics, I,

ELECTIVE STUDIES:

<i>Human Anatomy, b,</i>	<i>History,</i>
<i>Economic Geology,</i>	<i>English Bible,</i>
<i>Money and Banking,</i>	<i>Modern Language,</i>
<i>Chemistry,</i>	<i>History of Education, b.</i>

III. TERM—Bacteriology,	Forestry, I.
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ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Literature,</i>
<i>Railroad Transportation,</i>	<i>English Bible,</i>
<i>Forestry,</i>	<i>Modern Language,</i>
<i>History,</i>	<i>Advanced Composition, b,</i>
<i>Secondary Education.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CHEMICAL ENGINEERING.

*Leading to the First Degree in Chemical Engineering.***FRESHMAN YEAR.**

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|--|-------------------------------|
| I. TERM—Chemistry,
Higher Algebra,
<i>German or French,</i>
or <i>Spanish,</i> | Rhetoric, I,
Drawing, IV. |
| II. TERM—Chemistry,
Trigonometry,
<i>German or French,</i>
or <i>Spanish,</i> | Rhetoric, I,
Drawing, IV. |
| III. TERM—Chemistry,
Analytical Geometry,
<i>German or French,</i>
or <i>Spanish,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

- | | |
|--|---|
| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | History of Art, I, or
South America, I,
Shopwork, II. |

JUNIOR YEAR.

- | | |
|---|--|
| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | German Chemistry, I,
Chemical Thesis. |

- III. TERM—Organic Chemistry, German Chemistry, I,
 Spectrum Analysis, Chemical Thesis.
 Agricultural Chemistry, 2 or
 Boilers and Engines,

SENIOR YEAR.

- I. TERM—Physical Chemistry, { Social Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Geology,
- II. TERM—Physical Chemistry, { Political Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Direct Current Machinery, or
 Hydraulic Motors, or
 Economic Geology,
- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
 Alternating Current Machinery,
 or *Water Supply and Sani-*
 tary Engineering, or *Survey-*
 ing, or *Advanced Composi-*
 tion, b,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VIII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Drawing, Oratory, I.
 German or French,
 or *Spanish*,

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|--|-------------------------------|
| II. TERM—Trigonometry,
Drawing,
<i>German or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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|--|------------------------------|
| I. TERM—Rhetoric,
Surveying,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Descriptive Geometry,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |

JUNIOR YEAR.

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|--|-------------------------------------|
| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
{ Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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|--|----------------------------------|
| I. TERM—Bridges and Buildings,
Geodetic Astronomy,
<i>Geology or</i>
<i>Theoretical Mechanics or</i>
<i>Electrical Measurements,</i> | { Social Ethics, I,
{ Thesis. |
|--|----------------------------------|

- II. TERM—Hydraulic Motors, { Political Ethics, I,
 Bridges and Buildings, { Thesis.
Economic Geology or
Advanced Physics or
Direct Current Machinery,
- III. TERM—Bridges and Buildings, Contracts and Specifica-
 { Mine Surveying, tions, I.
 { City Surveying,
Railroad Transportation or
Advanced Physics or
Alternating Current Machinery
 or *Forestry*, or *Advanced Com-*
position, b,
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IX. THE COURSE IN ELECTRICAL ENGINEERING.

Leading to the First Degree in Electrical Engineering.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Drawing, Oratory, I.
German or *French*,
 or *Spanish*,
- II. TERM—Trigonometry, Rhetoric, I,
 Drawing, Oratory, I.
German or *French*,
 or *Spanish*,
- III. TERM—Analytical Geometry, Rhetoric, I,
 Drawing, Shopwork, IV.
German or *French*,
 or *Spanish*,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I, or
 Mechanics, History of Art, I,
 Chemistry, Shopwork, IV.

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|---|---|
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | Astronomy, I, or
South America, I,
Shopwork, II. |

JUNIOR YEAR.

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|--|--|
| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry</i> , or
<i>Theoretical Mechanics</i> , | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |
| III. TERM—Alternating Current Machinery,
Advanced Physics,
Boilers and Engines, | Machine Design
and Tools, I,
Thesis. |

SENIOR YEAR.

- | | |
|---|-----------------------------------|
| I. TERM—Design of Electrical Machinery,
Electrical Generating Stations and Transmission,
Graphical Analysis of Structures, | { Social Ethics, I,
Thesis. |
| II. TERM—Design of Electrical Machinery,
Telegraphs, Telephones, and Signaling Apparatus,
Hydraulic Motors, | { Political Ethics, I,
Thesis. |
| III. TERM—Electric Lighting,
Electric Railways,
<i>Water Supply and Sanitary Engineering</i> , or <i>Surveying</i> ,
or <i>Advanced Composition</i> , b, | Contracts and Specifications, I. |

X. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

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|--|-------------------------------|
| I. TERM—Advanced Algebra,
Drawing,
<i>German or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Shopwork, II. |
| II. TERM—Trigonometry,
Drawing,
<i>German or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Shopwork, II. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German or French,</i>
<i>or Spanish,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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|---|---|
| I. TERM—Rhetoric,
Mechanics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | History of Art, I, or
South America, I,
Shopwork, IV. |

JUNIOR YEAR.

- | | |
|---|-------------------------------------|
| I. TERM—Electrical Measurements,
Descriptive Geometry,
Strength of Materials, | Shopwork, IV,
Machine Design, I. |
| II. TERM—Direct Current Machinery,
Thermo-Dynamics,
Metallurgy, | Shopwork, IV,
Machine Design, I. |

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|--|-------------------------------------|
| III. TERM—Alternating Current Machinery,
Thermo-Dynamics,
Boilers and Engines, | Shopwork, IV,
Machine Design, I. |
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SENIOR YEAR.

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|--|--|
| I. TERM—Steam Engineering (49),
Design of Electrical Machinery,
Bridges and Buildings, | { Social Ethics, I,
Thesis,
Automobiles, IV. |
| II. TERM—Steam Engineering (50),
Design of Electrical Machinery,
Hydraulic Motors, | { Political Ethics, I,
Thesis,
Heating and
Ventilation, IV. |
| III. TERM—Steam Engineering (51),
Electric Lighting,
<i>Water Supply and Sanitary Engineering, or Surveying, or
Advanced Composition, b,</i> | Contracts, I,
Refrigeration, IV. |
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XI. THE TWO YEAR COURSE IN DOMESTIC SCIENCE.

FIRST YEAR.

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|---|---|
| I. TERM—Chemistry, 5,
General Psychology, 5,
Cookery { Principles, 1,
Practice, 4, | Thesis,
Physical Training, 2,
Sewing, 2. |
| II. TERM—Chemistry, 5,
Personal Hygiene, 5,
Cookery { Principles, 1,
Practice, 4, | Thesis,
Physical Training, 2,
Mechanical Drawing, 1,
Sewing, 2. |
| III. TERM—Chemistry, 5,
Home Nursing and Emergencies, 5,
Cookery { Principles, 1,
Practice, 4, | Thesis,
Physical Training, 2,
Domestic Architecture, 1,
Sewing, 2. |

SECOND YEAR.

- | | |
|--------------------------------|-------------------------|
| I. TERM—Chemistry of Foods, 5, | Thesis, |
| Biology, 5, | Physical Training, 2, |
| Cookery { Principles, 1, | Methods of Teaching Do- |
| { Practice, 4, | mestic Science, 1. |
| French, 5, | |
| II. TERM—French, 5, | Thesis, |
| Cookery, 4, | Physical Training, 2, |
| Dietetics and Domestic Sani- | Invalid Cookery, 1, |
| tation, 5, | Methods of Teaching, 1. |
| III. TERM—French, 5, | Thesis, |
| Cookery, 4, | Methods of Teaching, 1, |
| Bacteriology, 5, | Household Manage- |
| Child Psychology, 5, | ment, 2. |

Certificates of graduation are granted to students who complete the two year Domestic Science Course.

DEPARTMENTS OF INSTRUCTION.

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented analytically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D., PROFESSOR.

The studies in this department embrace Psychology, Philosophy, Ethics, and Theism.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Lotze, Grundzüge der Psychologie.** Seniors and Juniors. Minor. One hour.

4. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

5. **History of Philosophy.** Text-book and Lectures. Required of Juniors. Third term, five hours.

6. **Philosophy of Religion.** Third term, five hours.

7. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

8. **Roman Philosophy** (Latin 8). Elective to Seniors and Juniors.—PROFESSOR ROCKWOOD.

9. **Ethics**. Required of Juniors. Second term, five hours.

10. **Social Ethics—Domestic Relations**. Lectures. Required of Seniors. First term, one hour.

11. **Political Ethics—Duties of Citizenship**. Lectures. Required of Seniors. Second term, one hour.

12. **Ethics of Plato and Aristotle**. Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

II. DEPARTMENT OF EDUCATION.

LLEWELLYN PHILLIPS, D.D.,

PROFESSOR OF EDUCATION.

1. **History of Education, a. Ancient and Medieval**. Seniors and Juniors. First term, five hours.

2. **History of Education, b. Modern**. Seniors and Juniors. Second term, five hours.

3. **Principles of Education**. Seniors and Juniors. First term, five hours.

4. **Educational Theories**. Seniors and Juniors. Second term, five hours.

5. **Psychology of Education**. Seniors and Juniors. Third term, five hours.

6. **Comparative Psychology**. Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

7. **Child Psychology**. With special reference to teaching. Sophomores. Third term, five hours.—MISS CAREY.

8. **Secondary Education. Administration and Methods.** Seniors and Juniors. Third term, five hours.

9. **Religious Education.** Lectures. Second term, one hour, Juniors. Third term, one hour. Seniors and Juniors.

10. **Teachers' Course in Latin.** Special topics in grammar, with practical exercises in Cæsar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **Teachers' Course in English.** Designed to familiarize the student with the authors required for entrance to college with a view to teaching them.—PROFESSOR PERRINE.

12. **Teachers' Course in Mathematics.** Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools; reforms in arithmetical teaching. (b) Algebra: Its growth during the last three centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry. Seniors and Juniors. First term.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Principles of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

TEACHERS' CERTIFICATES.

Teachers' Provisional Certificates of Pennsylvania are issued to graduates of Bucknell University good for three years; Permanent Certificates are issued upon three years' successful experience in teaching in the schools of the state. Teachers' Certificates are also issued to graduates of Bucknell University by the Department of Education, State of New York, State of New Jersey, and all other states which issue certificates to the graduates of any college.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

III. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND AGENCY.

THOMAS WOOD, A.M., LL.B.,
ATTORNEY-AT-LAW.
LECTURER ON REAL PROPERTY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History* and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law in Pennsylvania without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B. I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—MR. WOOD.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—JUDGE JOHNSON,

5. **Contracts.** Text-books, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-books, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—MR. WOOD.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** First term, Seniors and Juniors.—PROFESSOR HAMBLIN.

13. **Constitutional Limitations.** Cooley's Constitutional Limitations and Cases.—PROFESSOR HEIM.

14. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

15. **Moot courts** are held in which an attorney-at-law and a student sit as judges, and students, deputed to represent the respective sides, present their arguments. The presiding student writes the opinion of the court.

IV. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. Corporate Finance and Commercial Law. Organization and Management of Corporations. Corporation Finance. Form and Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. Transportation and Commerce. Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. Economics. Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. American Civics. A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. American Constitutional Law. Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.—PROFESSOR HAMBLIN.

10. Constitutional Limitations. The Constitutional Law of the American Commonwealth. The sphere of Civil Rights in relation of the exercise of governmental power through the criminal law, the police power, the taxing power, and the power of eminent domain.

11. Comparative Politics. A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

12. Municipal Government. Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

13. International Law. First term, five hours. Seniors and Juniors.

14. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party

Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

15. **Political Science.** Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

16. **American Diplomacy.** Minor Course, two hours.

V. DEPARTMENT OF SOCIOLOGY AND LOGIC.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. **Anthropology, Descriptive and Physical.** Elective to Sophomores. Third term, five hours.

2. **Sociology, Principles and Theory.** Elective to Seniors and Juniors. First term, five hours.

3. **Charities and Reform.** Seniors and Juniors. Second term, one hour. Prerequisite, Course 2.

4. **Municipal Sociology.** Seniors and Juniors. Second term, five hours.

5. **History of Art.** Lectures. Sophomores. Three terms, one hour. I. Painting; II. Sculpture; III. Architecture.

6. **Logic, Deductive and Inductive.** Second term, five hours.

7. **Scientific Method, with Exercises in Analysis.** Seniors and Juniors. Second term, five hours.

VI. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. **Oriental History.** A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. **Hebrew History and Literature.** First term, five hours.
—PROFESSOR PHILLIPS.

3. **New Testament History and Literature.** Second term, five hours.—PROFESSOR PHILLIPS.
4. **Greek Political and Constitutional History.** First term, five hours.—PROFESSOR HAMBLIN.
5. **Roman History.** Second term, five hours.—PROFESSOR ROCKWOOD.
6. **Roman Private Life.** Second term, five hours.—PROFESSOR BALLENTINE.
7. **Medieval Europe.** General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.
8. **Modern Europe to 1789.** From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.
9. **Modern Europe since 1879.** The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.
10. **History of England, a.** Political and industrial development of the English people from the earliest times. Second term, five hours.
11. **Constitutional History of England, b.** With special reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.
12. **American Colonial History, a.** European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.
13. **American Constitutional History, b.** Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.
14. **Industrial History of United States.** Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms

of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. **Teachers' Course in American History.** General survey of American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VII. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

There are four terms of required work in Greek in the Classical Course, and five in the Greek Philosophical Course; while Greek may be taken as an elective during the entire Junior and Senior years. A course of New Testament Greek, designed especially for candidates for the ministry and extending through the year, is given in alternate years to Seniors and Juniors.

1. **Homer.** Odyssey, Books 5-8. Review of verb forms and syntax of verbs. Epic forms and styles. Word lists. Metre. First term, Freshman year.

2. **Lysias.** Six orations. Inflection and syntax of nouns. Prose composition. Attic oratory. Translation at sight and hearing. Second term, Freshman year.

3. **Plato.** Apology and selections. Special topics in Greek Syntax. Philosophy and influence of Socrates. The Sophists. Extracts from the Memorabilia at sight. Third term, Freshman year.

4. **Greek Political and Constitutional History.** Bury's History of Greece is used as a text-book. The class is also required to do collateral reading on important epochs. First term, Sophomore year.

5. **Demosthenes.** Olynthiacs and Philippics. History and Politics of the Macedonian period. Style of Demosthenes. Second term, Sophomore year.

6. **Æschylus and Sophocles.** Prometheus Bound and Œdipus Tyrannus. The drama, theatre, and metres. First term in alternate years.

7. Euripides and Aristophanes. Medea and The Clouds. Greek Comedy. Religious influence of the poets. Influence of the Classical on the Modern Drama. Second term in alternate years.

8. Greek Literature in English. A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

9. Plato. The Phaedo. Greek Philosophy. The influence of Plato. Third term, Seniors and Juniors; alternating with 7.

BIBLICAL HISTORY AND LITERATURE.

1. New Testament Greek. Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Three terms. Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

2. Hebrew History and Literature. Beginning of the nation to the Greek period. Seniors and Juniors. First term, five hours.—PROFESSOR PHILLIPS.

3. New Testament History and Literature. Greek period to close of Paul's life. Seniors and Juniors. Second term, five hours.—PROFESSOR PHILLIPS.

4. Gospels and Post-Pauline Writings. Seniors and Juniors. Third term, five hours.—PROFESSOR PHILLIPS.

VIII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

FLOYD GEORGE BALLENTINE, PH.D., PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (selected speeches) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. **Cicero.** *De Senectute*. Livy, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. **Livy.** Books XXI and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. **Cicero.** *De Officiis*. Cicero's standing as a philosopher. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. **Horace.** Selections from the Odes, Satires, and Epistles. Prosody; Historical Outlines of the Latin Language and Literature; Wilkins' Primer; Lectures. First term, Sophomore year, two divisions.

5. **Roman History.** The work is based on Meyer's Rise and Fall of Rome. Mommsen, Bury and Gibbon are used for supplementary reading. Second term, Sophomore year.

6. **Quintilian.** Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. **Juvenal.** Selected Satires. Third term; open to those who have taken Course 4.

8. **Roman Philosophy.** Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. **Plautus and Terence.** Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term, open to Seniors and Juniors; alternating with 14.

10. **Latin Inscriptions.** Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus.** Annals. Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Cæsar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.

17. **Classical Philology.** Introductory Course, one hour.

IX. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature.** Introductory Course. Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, first term, Sophomore.

2. **English Literature from 1832.** For those who have taken Course 1; alternating with Course 13.

3. **English Literature, 1790-1832:** Wordsworth, Coleridge, Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.

4. **English Literature, 1714-1790.** For those who have taken Course 1, and alternating with Course 15.

5. **English Literature, 1600-1660.** For those who have taken Course 1, and alternating with Course 8.

6. **Shakspere.** Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.

7. **Shakspere.** His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.

8. **The English Drama.** Its development from the earliest times to Shakspere. For those who have taken Course 1, and alternating with Course 5.

9. **Teachers' Course in English.** Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to College. For those who have taken Course I, and alternating with Course 10.

10. **Principles of Literary Criticism.** For Seniors and Juniors, alternating with Course 9.

11. **American Literature,** with special reference to the national period. For those who have taken Course 1.

12. **Journalism,** a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For Juniors and Seniors who have taken Course 1.

13. **Anglo-Saxon.** Old English Language and Literature, with special elective in Beowulf. For Juniors and Seniors who have taken Course 1.

14. **Chaucer.** Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's The English Language. For those who have taken Course 1.

15. **Modern English.** Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.

16. **Foreign Literature in English.** Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course lectures are given on Modern English Fiction.

17. **Periods of English Literature.** Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. **Le Public et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut.** Junior.

19. **Shakspeare.** Fünf Vorlesungen von Bernhard ten Brink. Junior.

X. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

CHARLES CARPENTER FRIES, A.M., ASSISTANT PROFESSOR OF RHETORIC.

BROMLEY SMITH, A.M., INSTRUCTOR IN RHETORIC AND ORATORY.

GEORGE WADE EARLE, A.M., INSTRUCTOR IN RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. **Rhetoric and English Composition.** Introductory Course. Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen. Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. **English Composition.** Themes, recitations, and consultations. Required of Sophomores.

(a) First term; five hours. Special attention to technical writing. Students in Engineering and in Biology.

(b) Second term; five hours. Students in the literary courses.

3. **Argumentation.** Briefs, forensics, and discussion of the principles that underlie argument. Third term; five hours. Open to students who have passed in 1 and 2.

4. (a) **English Composition.** Advanced Course. Third term; five hours. Open to Seniors and Juniors.

4. (b) **Technical Writing.** Advanced Course. Third term; five hours. Open to Seniors and Juniors.

5. **Theses.** Every member of the Junior and of the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement orations. The subjects of the theses are presented to the Professor of Rhetoric before October 22 and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in the development of prose style. Five hours. Open to Seniors and Juniors.

7. **Diction and Usage.** An historical approach to questions of usage and style. Five hours. Open to Seniors and Juniors.

8. **Teachers' Course.** The theory of Rhetoric and the teaching of English Composition. Five hours. Open to Seniors who have had 3, 6, and 7.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory, aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. **Public Speaking.** Delivery of complete orations illustrating and applying the principles studied in the first and second terms. A prize is offered to the young man and one to the young woman of the Freshman Class who excel in the delivery of these orations. Required, third term.

SOPHOMORES.

4. **Public Speaking.** Close analysis and study of the details of public speaking; study of the various styles of delivery and of the different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. **Public Speaking.** Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second, term, one hour.

6. **Public Speaking.** Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. **Public Address.** The various forms of addressing the public are studied. Beginning with open letters and editorials, the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens in the above forms. Third term, five hours; Sophomores.

8. **Practical Oratory.** Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. **Interpretative Reading.** The use of the voice in bringing out the meaning of the best literature is obtained by practice in class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors. (Counts as Minor.)

JUNIORS.

10. **Prize Contest.** A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in composition and elocution as shown during the preceding terms of the college Course.

11. **Prize and Honor Debate.** During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. Oral Debates. Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. Honors in Debating. During the year an elective course in debating is offered to Seniors. The last debate is public.

14. Prize in Oratory. A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

XI. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,
PROFESSOR OF FRENCH.

LEO LAWRENCE ROCKWELL, A.M.,
INSTRUCTOR IN GERMAN.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

EDGAR CARLTON CAMPBELL, A.M.,
INSTRUCTOR IN FRENCH.

A.—GERMAN.

1. Elementary Course. Grammar; German Prose; practice in writing German. Three terms.

2. German Prose. Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. German Prose and Poetry. Grammar; practice in writing German. Elective Course for those who have taken Course 2.

4. Historical German Prose. Practice in writing German. Elective Course for those who have taken Course 3.

5. Modern German Novelists. Practice in writing German. Elective Course for those who have taken Course 4.

6. Schiller (a). Practice in writing German; lectures. Elective course for those who have taken Course 4.

7. **Schiller (b).** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

8. **Goethe (a).** Practice in writing German; lectures. Elective Course for those who have taken Courses 5-7.

9. **Goethe (b).** Shorter Poems, *Dichtung und Wahrheit*, *Faust I*; lectures. Elective Course for those who have taken Course 8.

10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken Course 9.

11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with Course 8.

12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with Course 9.

13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with Course 10.

14. **Lotze.** *Grundzüge der Psychologie.* (Philosophy 3.)

15. **German Biological Science.** (Biology 21.)

16. **German Chemical Science.** (Chemistry 16.)

17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B. —FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.

2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken Course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken Course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken Course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken Course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken Course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken Course 6.

8. **Authors of the XVIII Century.** Practice in writing French. Lectures. Elective Course for those who have taken Course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective Course for those who have taken Course 8.

C.—SPANISH.

PROFESSOR RIEMER.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. First term, five hours.

2 and 3. **Spanish Prose.** Translation, Composition, Conversation. Second and third term, five hours. The courses in Spanish are open to Freshmen, optional with German and French.

D.—ITALIAN.

Special instruction for engineering students in Italian Grammar and Conversation.

XII. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNÆUS DRUM, SC.M.,
PROFESSOR IN SURVEYING.

HARRY SCHEIDY EVERETT, A.M., SC.M.,
INSTRUCTOR IN MATHEMATICS.

ERNEST LAUNCELOT TAYLOR, A.M.,
INSTRUCTOR IN MATHEMATICS AND DRAWING.

JOSEPH LINCOLN CHALLIS, A.M.,
INSTRUCTOR IN MATHEMATICS.

JOSEPH JAMES DIRZULAITIS,
ASSISTANT IN SURVEYING.

RAYMOND EYLER SPRENKLE,
WALTER SHOFFSTALL,
ASSISTANTS IN DRAWING.

EARLE LEROY GRACE,
PETER PAUL BRANTLEY,
CHARLES CLEMENTS KEPPLER,
CLARENCE MACLAY KRINER,
PAUL AUGUSTUS WEAVER,
ASSISTANTS IN SHOPWORK.

GROVER CLEVELAND POUST,
CLIFFORD COATES DECK,
ASSISTANTS IN PHYSICS.

1. **Solid Geometry.** The course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differentiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. **Trigonometry.** The course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. **Analytical Geometry.** The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The course is intended to give a clear conception of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. **Differential Calculus.** The course includes higher derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

7. **Integral Calculus.** The course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and applications to problems in Physics and Mechanics. Sophomore year, third term, five hours.

8. **Higher Analytics.** The Course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior Advanced Calculus is included in Course 8; first term, five hours.

9. **Differential Equations.** A course with mechanical applications. Senior year, first term, five hours. This course alternates with Course 8.

10. **Descriptive Astronomy.** The aim of the course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science courses, first and second terms, one hour.

11. **General Astronomy.** The subject is taught by text-book, with illustrations in the observatory. Freshman year. Third term, five hours.

12. **Practical Astronomy.** Students use the ten-inch telescope and three-inch transit of the observatory. Open to all who have completed Course 11. Third term, five hours.

13. **Geodetic Astronomy.** The course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic determination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites, a course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

14. **Teachers' Course.** (a) History of Mathematics. (b) Arithmetic, its status at present in the schools and methods of teaching it. (c) Algebra, a study of its typical parts. (d) Geometry, its basis; methods; involutional geometry. (e) Trigonometry and its applications.

15. **Plane and Topographical Surveying.** Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text. Lectures, tests. Field practice in each position on corps using transit, Y, dumpy, and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

16. **Geodetic Surveying.** Minor course. Sophomore Civil Engineering, one hour throughout the year.

17. **Railroad Surveying.** Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary surveying for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixed grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

17a. A Course in Surveying specially adapted to their needs is offered as an elective to the Seniors in Chemical, Electrical, and Mechanical Engineering.

18. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

19. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

20. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids, and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses, Sophomore year, second term, five hours, and Junior year, first term, five hours.

21-23. Courses in Drawing. Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

24. Architectural Design. The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

25-27. General Physics. (Three terms.) These courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory, supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) **Electricity and Magnetism.** Second term.

(3) **Acoustics and Optics.** Third term.

28-31. Advanced Physics. The course extends throughout the year and assumes that the student has completed Courses 25-27 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Laboratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

28. Electrical Measurements. In this course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

29. Heat. A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous flow calorimeter and the Rowland apparatus.

30. Light. The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly, and Lummer-Brodhun screens.

31. Spectrum Analysis. Recitation one hour, Laboratory eight hours per week.

Comparison, observation, and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and miners; spark and arc spectra of solids; sparks and flame spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva Society, prisms of all types by the best makers, absorption cells, etc.

32. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

33. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

34-36. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic

methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

37. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications, and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

38. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurements of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

39. Water Supply and Sanitary Engineering. Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of streams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

40. Contracts. In this course are given the principles of Common Law as applied to contracts. Third term, Senior Engineering, one hour.

41. Theoretical Mechanics. Differential and integral calculus are required for admission to this course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of machinery, work, energy, friction, and impact. Juniors, first term, five hours.

42. Direct Current Machinery. This course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurements of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

43. Alternating Current Generators, Transformers and Motors. Electromotive force and current curves are traced, and their modi-

fications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation, and general performance of alternating current apparatus are studied in detail. This course must be preceded by the course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

44. Design of Electrical Machinery. During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lectures, computing exercises, drawing, and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

45. Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries. Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of secondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

46. Telegraph, Telephone, Railway Signal and Related Apparatus. Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, Electrical Engineering, second term, five hours.

47. Electric Lighting, Construction, Wiring, and Economics. The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

48. Electric Railways, Construction, Operation, and Economics. This course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking, and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

49. Machine Design, Machine Tools. Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

50. Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors. This is a general course dealing with the thermodynamics of the heat engine, the theoretical, indicated, and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proximate and ultimate analyses. A large number of problems relating to steam engines, boilers, and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, all Engineering Courses, third term, five hours.

51, 52, 53. Steam Engineering. Senior year, Mechanical Engineering, five hours, through the year.

51. Steam Engines and Turbines. In this course the different types of steam engines and turbines are carefully studied, going more into detail than in Course 50, special attention being given to the moving parts such as valves, valve-gear, etc. Also the various economizing appliances and their effect upon the cost of producing power are taken up. The classroom work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

52. Boilers. A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors, and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

53. Steam Engine Design. This course follows very closely Course 51, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the classroom each student is required to design and draw the parts for a steam engine of given size. Third term.

54-56. Shopwork. In Mechanical Engineering, shopwork is required of students throughout the four years of the course. In Civil, Electrical, and Chemical Engineering, it is required throughout four terms. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four courses are given, each extending through a year.

54. Wood-working. The course in wood-working consists of carpentry, cabinet work, and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

55. Pattern-making and Moulding. A general course covering patternmaking, simple moulding, and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes, and electric motors are made and assembled during the course. Sophomore year, all Engineering Courses, four hours.

56. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history, and design being discussed. Each student is required to design the parts, make the patterns, and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

57. Steam Engine. The work in this course is similar to that in Course 55, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

58. Internal Combustion Engines. A lecture course supplemented by reading and problems. It starts with the general theory of the internal combustion engine, expanding into a detailed study of the actual machine as manufactured and used. Special attention is given to the different types of engines, methods of introducing the working fluid, and the various systems of ignition, the automobile engine receiving a major portion of the time. Senior year, fall term, four hours.

59. Heating and Ventilation. In this course a general study of the various systems of heating buildings is taken up. Attention is given to the comparative merits, under differing circumstances, of the different systems, such as hot air, steam, hot water; direct and indirect heating; ventilation by fan and by natural air currents, special emphasis being given to installing details such as piping systems, location of drips, air valves, etc., together with computation of

costs and efficiencies. The lectures are accompanied with problems and experiments. Senior year, winter term, four hours.

60. Refrigeration. This course consists of a series of lectures accompanied by illustrative problems bearing upon the various principles and systems of refrigeration. A study is made of the properties and action of ammonia as applied to refrigeration plants. The ice plant is studied in detail and cold storage construction is considered. The subject is taken up from the point of view both of operation and economics. Senior year, Mechanical Engineering, four hours.

XIII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
INSTRUCTOR IN CHEMISTRY.

GEORGE BARNHART,
MAURICE BACON COOK,
CHARLES AUSTIN SOARS,
LLOYD LOY GARDNER,
ASSISTANTS.

The courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigations and to train the student in the various methods of chemical research. The courses as a whole are offered to those who expect to teach chemistry or enter the testing or industrial laboratory. As chemistry is at the foundation of the natural sciences, the first courses are essential to the study of science and medicine, and are important for general culture.

1. Descriptive Chemistry. Text-books, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are

determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4, 5, 6. **Quantitative Analysis.** This course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy, and water are studied.

(3) In the third term, Fire, Gas, and Electro-chemical methods are practiced.

7, 8, 9. **Organic Chemistry.** Prerequisites, courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Cairus' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later; polycyclic and heterocyclic compounds; terpens and camphors are taken up. In the laboratory, preparations of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) Organic Preparations. Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) Organic Preparations. A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas law, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermodynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) Third term. Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity, migration of iron, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. Chemical Preparations. Prerequisites, Courses 1, 2, and 3. Laboratory course; ten hours per week.

(1) First term. Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) Second term. Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Relations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. Industrial Chemistry. A series of lectures and recitations upon the most important technical chemical operations exclusive of metallurgy. A study of the application of chemical principles, technical processes, and the mechanical method of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, Courses 1, 2, and 3.

17. Metallurgy. The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, Courses 1, 2, and 3.

18. Agricultural Chemistry. The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, Courses 1, 2, and 3.

19. German Chemical Literature. One hour a week, throughout the year. Prerequisites, at least two terms of German, and Courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are read, and study is made of the derivation and formation of scientific words.

20. Physical Chemistry. Mathematical topics.

21. Organic Research.

22. History of Chemistry.

XIV. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR.

NORMAN HAMILTON STEWART, A.B., SC.M.,
PROFESSOR OF BIOLOGY.

ANNA ROBERTA CAREY, SC.B., A.M.,
INSTRUCTOR IN PHYSIOLOGY AND HYGIENE, DOMESTIC SCIENCE
COURSES.

JOHN WINTER RICE, SC.M., INSTRUCTOR.

JESSE WARREN NOLL,
CHESTER SCOTT KEEFER,
ASSISTANTS IN BIOLOGY.

It is the constant aim in this department to teach how to interpret nature. The student is guided in his investigations by lectures and laboratory manuals.

1a. Human Physiology. The aim of this course is to acquaint the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The course is intended for those who wish a general knowledge of Physiology.

1b. Human Physiology. General Physiology, Personal Hygiene, Home Nursing and Emergencies, Dietetics and Domestic Sanitation. Three terms, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors.

3. **Comparative Psychology.** Text-book, reports. Elective to Seniors and Juniors.

4. **Sanitary Science.** Lectures, one hour a week through the year.

5. **Human Osteology and Comparative Anatomy.** Recitations and dissections. In this course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. **Human Anatomy.** Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second course, similar to 6a.

7. **Normal Histology (a).** Recitations and lectures, and laboratory work. In this course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining, and sectioning.

8. **Normal Histology (b).** A continuation of Course 7.

9. **Embryology.** Recitations, lectures, and laboratory work. This course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds, and mammals.

10. **Biology.** Recitations and dissections. The aim of this course is to meet the needs of general education in this subject, and at the same time makes clear the fundamental principles, scope, method, history, and subdivisions of Biology and its relations to other sciences.

11. **Invertebrate Zoölogy.** Recitations and dissections. This course succeeds the Course in Biology. It takes up the study and dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. **Vertebrate Zoölogy.** Recitations and dissections. This is a continuation of Course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. **Philosophy of Zoölogy.** Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. **Entomology.** Recitations and laboratory work. In this course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. **Heredity.** Minor course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. **Phænogamic Botany.** Recitations, lectures, and field work. This is a general course including the anatomy of the representative types and their relation to the environment; a study is made of the local flora.

17. **Cryptogamic Botany.** Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. **Advanced Botany.**

19. **Elements of Forestry.** A course covering the factors that control and regulate the development of forests.

20. **Bacteriology.** Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

21. **Mineralogy and Geology.** Recitations, lectures, and laboratory work. A general course intended to give the leading facts and principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

22. **Economic Geology.** Recitations, lectures, and laboratory work.

23. **Historical Geology.**

24. **German Biological Literature.** Junior year, one hour throughout the year.

MEDICAL PREPARATORY STUDIES.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on the work in the Organic Sciences. A large room has been fitted up especially for Microscopic work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of reference, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeleton, a life-sized French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

G. NORMAN WILKINSON, SC.B., TAXIDERMIST.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia Medica. Parts of these collections are kept in the laboratories and used in classroom work,

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystallized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian antiquities. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library, ninety feet long, has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

MARGARET GEISSENHAINER MATTERN, AND EUGENE PETER BERTIN,
ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in classroom work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

The sum of twenty-five thousand dollars has been received as a legacy from William H. Backus, M.D., Class of 1853, the income from which is to be used in the purchase of books.

The Carnegie building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve one year or until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University, under seal, that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

EXHIBITING CLUBS.

Public exhibitions in Music, Oratory, or Athletics are under the control respectively of the Director of the School of Music, of the heads of the departments of Oratory, and of the Comptroller of Athletics. No other exhibitions or concerts are authorized. Alumni and friends should always communicate with the proper authorities before making engagements.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average standing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below

8.5; or if in his Senior year it is below 9. The passing grade for graduate students is 9. No one will be recommended for graduation in the Courses of Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon the studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire course are graduated *summa cum laude*; students who attain an average of 9.2 or more graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall, which all the students of the College are required to attend.

Attendance upon public worship in some church in town on Sunday morning is required. Students are required to attend the religious services held on Thanksgiving Day.

GOVERNMENT.

It is assumed that all who enter the courses of study in the College do so for the purpose of acquiring an education, not only of the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The College does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in her office College women who may desire advice or assistance from her.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting, missionary, and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

Euepia; Theta Alpha. These are the two Literary Societies of the College for men. They hold meetings for Orations, Essays,

and Debates. Each Society has a convenient hall, and by an arrangement of the Faculty will always have a nearly equal number of members.

The Zeta Literary Society is composed of young women admitted to any of the courses in the College.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknell Mirror*. This periodical appears monthly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

Another association of students publishes, weekly, during the school year, the *Bucknellian*.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or classroom work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. This is now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

PHYSICAL CULTURE—WOMEN'S COLLEGE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Calisthenium of the Women's College is furnished with Indian clubs, dumb bells,

wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

Two hours a week in the Calisthenium during the winter term is required for all resident students, Juniors and Seniors of college excepted. No student will be excused from the required exercise except by order of the Director of Gymnastics. Special exercises are prescribed for students needing individual corrective work.

Every student while exercising in the Calisthenium must wear a gymnasium suit of the pattern prescribed by the Director.

Swedish gymnastics, æsthetic gymnastics, light apparatus drill, playground work and games are taught. Lectures on health and hygiene are given throughout the year.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics.

The prize for 1916 was not awarded.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1916 was awarded to Charles Harris Davies.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1916 was awarded to Everett Thomas Jones.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation are open for competition to the Sophomore and Freshman Classes. The prize for the Freshman Class was awarded, in 1916, to Helen Roberta Hoffa.

The prize for the Sophomore Class was awarded to Ethel Hewitt.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1916 to Eugene Peter Bertin.

The corresponding prize for women was awarded in 1916 to Ruth Pauline Barthold.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1916 to Edwin Ewart Aubrey, first, and Miller Alanson Johnson, second.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The first prize was awarded in 1916 to Richard J. W. Templin, and the second to Charles Eugene Tilton.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A.M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The prize for excellence in Latin was awarded in 1916 to Olive Fillicent Park.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A. M., Chaplain in the United States Navy, and a graduate from the Theological Department of this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1916 to Carrie Foresman.

THE BUCKNELL PRIZES FOR WOMEN.

The following prizes for women were founded by William Bucknell, of Philadelphia:

1. A Senior Prize to be awarded to the member of the graduating class of the College, who shall attain the highest grade in the studies of the four years' College Course.

Awarded in 1916 to Vernie Grace Noll.

2. A Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

Awarded in 1916 to Margaret Weddell.

3. A Junior Prize, to be awarded to the member of the Junior Class who, being excellent in scholarship during the Junior Year, shall prepare the best essay.

Awarded in 1916 to Helen Krouse.

4. A Sophomore Prize, to be awarded to the member of the Sophomore Class who, being excellent in scholarship during the year, shall prepare the best Sophomore essay.

Awarded in 1916 to Margaret Mattern.

5. A Freshman Prize, to be awarded to the member of the Freshman Class who, being excellent in scholarship during the year, shall prepare the best Freshman essay.

Awarded in 1916 to Agnes Carswell.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from works which will be announced by the Professor of Rhetoric each year.

SCHOLARSHIPS.

I. BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A.M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A.B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIPS

Were established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnæ Club, is available for a woman student from Philadelphia.

X. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy students.

XI. THE ESTHER OWENS SCHOLARSHIPS

Have been founded by a gift from Miss Esther Owens.

XII. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnæ and friends. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able. This fund is controlled by an Executive Board, who hold their annual meeting the second Tuesday in January.

During the last twenty-eight years eighty-six young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association.

Applications for loans should be made at or before the semi-annual meeting of the Board the second Tuesday in October.

Contributions should be sent to the Treasurer, Mrs. John T. Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katherine B. Larison, Lewisburg, Pa., or Mrs. Llewellyn Phillips, Corresponding Secretary, Lewisburg, Pa.

FOURTH STUDY.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take a fourth study in the College.

2. If the student shall attain an aggregate average of 9 in all the studies of the current term, and pass a satisfactory examination on the fourth study, it shall be credited to him.

EXPENSES.

The College charges amount to \$160 per annum, for those who room in the College buildings, and \$150 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as Tuition. Scholarships are rated at \$50 per annum, and that amount is deducted from College charges. Students in the Course in Civil, Electrical, or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged at same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$15 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damages to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms, according to the number of lights used.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board.

Young women in the Collegiate Department room and board in the Women's College.

EXPENSES OF STUDENTS IN WOMEN'S COLLEGE.

I. Boarding Students. The regular charge for Boarding Students in College Courses and Domestic Science Course, is \$350.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

This does not include the personal laundry of the student.

For the rooms in the Bucknell Cottage and in the New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students in College Courses and in Domestic Science Course is \$150.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing, and Painting, and Music, will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence an account of sickness.

The expenses for Music, Printing, and other charges ordinarily incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$10.00.

Free scholarships, covering tuition, are awarded to children of Ministers of the Gospel *in actual service*.

Tuition is rated at \$50.00 per annum.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is

credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$10 per term is charged for gas, water, and general chemicals for each course, except Courses 1 and 2, for which the charge is \$3. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men students can board in clubs at a cost of from \$2.50 to \$3 per week. Boarding can be obtained in private families at \$4 or \$5 per week, or at the table of the Bucknell Academy at \$4 per week. No self-boarding is allowed in the College buildings.

SUMMER SESSION.

NELSON FITHIAN DAVIS, SC.D.,

DEAN OF THE SUMMER SCHOOL.

The summer courses offered at Bucknell University for 1917 will begin Monday, July 2, and continue for six weeks. No sessions will be held on Saturdays.

The summer courses are primarily designed for the following classes of students:

1. Teachers in the public schools who desire advanced instruction and opportunities for research with or without regard to a degree or professional advancement.

2. Students who desire to secure additional residence courses in university work.

CREDIT FOR SUMMER COURSES.

All courses will be given hour for hour credit as satisfying the requirements for a degree. All courses offered are of college grade.

ADMISSION REQUIREMENTS.

No examinations are required for admission to the summer courses. Courses are open to men and women who are qualified to pursue them to advantage, but persons who desire credit toward a degree must satisfy the entrance requirements of Bucknell University before the work may be so credited. A permanent record will be kept of all work satisfactorily completed in the summer session.

BOARD AND LODGING.

Board and lodging may be obtained near the college at reasonable rates. Classes will be so arranged that students living in all nearby towns can attend and live at home. Arrangements will be made whereby furnished rooms in the college buildings can be had provided there is demand.

REGISTRATION.

All persons who intend to take summer courses are requested to send their application to Walter S. Wilcox, the Registrar of the University, if possible, before June 1, 1917.

FEES.

The tuition for three courses, \$25. Double time courses are counted the same as two single courses.

One course, \$10; two courses, \$20; four courses, \$31.25. Students will not be allowed to take more than four courses. All bills must be paid by July 6. No credit will be extended after that date. Information regarding laboratory fees is included in the detailed announcements of the courses in science.

The college makes no reduction for late entrance or for withdrawal before the close of the session; except that a proportional part of the fee is returned to a student who is compelled, through illness or other serious cause, to discontinue his course before the middle of the session.

LIBRARY AND MUSEUMS.

The Carnegie Library and the Museums of the University will be open for the use of the summer students without charge.

DESCRIPTION OF COURSES.

For detailed description of the Courses offered, reference is made to the Special Bulletin, copies of which may be obtained by applying to the Registrar, Walter Samuel Wilcox, Sc.M.

The Courses will include School Administration, History of Education, Child Psychology, Methods of Teaching English, Teachers' Biology, History (Economic and Political) of the United States; Courses in the Latin, French, and Spanish Languages; in English Literature; in Rhetoric and Oratory; in Algebra and Trigonometry; in Chemistry and in Biology.

WALTER SAMUEL WILCOX, REGISTRAR,
Lewisburg, Penna.

SIXTY-SIXTH ANNUAL COMMENCEMENT.

WEDNESDAY, JUNE 21, 1916.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

CARRIE DUNBAR FORESMAN,
 VERNIE GRACE NOLL,
 OLIVE MILLICENT PARK,

RICHARD J. W. TEMPLIN,
 CHARLES EUGENE TILTON,
 MARGARET CELESTE WEDDELL.

ORATIONS MAGNA CUM LAUDE.

LESTER JUDSON BARTLETT,
 BRUCE EDWARD BUTT,
 EDGAR CARLTON CAMPBELL,
 MAURICE BACON COOK,

RUSSELL WILLIAM EVERETT,
 EDWIN CHARLES HAGEMANN,
 CECILIA KITLOWSKI,
 ERIC ADAM OESTERLE,

DAYTON LEO RANCK.

ORATIONS CUM LAUDE.

RAY PAUL BIGLER,
 WADE FRANCIS BLACKBURN,
 SAMUEL MILTON BRYANT,
 DOROTHY ELIZABETH BUNNELL,
 JOHN JOSEPH CONWAY,
 SAMUEL MARSHALL DAVENPORT,
 JOHN JONATHAN DE HAVEN,
 MARGARET WASHINGTON EVANS,
 HAROLD WENDELL GIFFIN,
 HILDRED HOWARD HANN,
 THOMAS LEWIS JAMES,
 JOHN FREDERICK JEFFERY,

HELEN JENKINS,
 CYRIL ELTON LEWIS,
 JOSEPH EARL MALIN,
 RUTH SPRAGUE MATTERN,
 THERESA CATHERINE MCCOLLUM,
 ELIZABETH LUCILE MCGEE,
 AMY LLEWELLYN PATTERSON,
 NORMAN JACOB REHMAN,
 ANNA LOIS REYNOLDS,
 KENNETH COLQUHOUN RITCHIE,
 HOMER MORRISON SANDERS,
 EDITH PAULINE SUPERKO,

GRACE ISABEL SUTTON,
EMMA ESTHER WEDDLE,
ANNA WILLIAMS,

HENRY CHARLES WOLFE,
VIRGINIA BLANCHE WOOD,
RUBY JANE YOUNG.

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 21, 1916.

A. DEGREES IN ARTS.

I. MASTER OF ARTS.

ABRAM STERLING BARNER,
EDWIN CHARLES BRUSH,
FRANK RAHN HEAN,
FRANK HOLLINGSHEAD,
EARL LOGAN JACKSON,
HELEN MAE OLDS,

CHARLES FRANCIS POTTER,
EDGAR LLOYD ROGERS,
CLAY SHOEMAKER SANDERS,
DWITE HAYDEN SCHAFFNER,
ALVA MCGREGOR WELCHONS,
SAMUEL KNOX WHITE,

JOHN J. WILLIAMS.

II. BACHELOR OF ARTS.

SAMUEL GUY ALTER,
LESTER JUDSON BARTLETT,
EDGAR CARLTON CAMPBELL,
RUTH EMLYN EMBREY,
MARGARET WASHINGTON EVANS,
HELEN IRENE HORTON,
CECELIA KITLOWSKI,
MARY BELLE LEES,
THERESA CATHERINE MCCOLLUM,
ELIZABETH LUCILE MCGEE,

VERNIE GRACE NOLL,
ELSIE MARTHA PARK,
OLIVE MILLICENT PARK,
DAYTON LEO RANCK,
ANNA LOIS REYNOLDS,
EDITH PAULINE SUPERKO,
MARGARET WEDDELL,
ANNA WILLIAMS,
VIRGINIA BLANCHE WOOD,
RUBY JANE YOUNG.

III. BACHELOR OF PHILOSOPHY.

JAMES BURK FOLEY,
MARY ELLA FREED,
ARTHUR WILLIAM FULTON,
CLARENCE EDWARD GLASS,
HELEN DERR LEWIS,
JOSEPH EARL MALIN,

OLIVER HAYES MCFARLAND,
ERIC ADAM OESTERLE,
MARY FLORENCE ROLLINS,
SAMUEL MUTCHLER SHIPMAN,
WILLIAM LEE SHOWERS,
CHARLES EUGENE TILTON,

FRANK GEORGE URBANOWICZ.

B. DEGREES IN SCIENCE.

I. THE SECOND DEGREE IN GENERAL SCIENCE.

JACOB KREIDER BOWMAN, MINOR RAYMOND KENDALL.

II. THE FIRST DEGREE IN GENERAL SCIENCE.

WADE FRANCIS BLACKBURN,	MARGARET MORTON MCFARLAND,
FLEMING CLAUDE BOWER,	JAMES EDWARD NANCARROW,
SAMUEL MILTON BRYANT,	GEORGE H. NEFF, JR.,
DOROTHY ELIZABETH BUNNELL,	WILLIAM LOUIS PARK,
JOHN JONATHAN DE HAVEN,	AMY LLEWELLYN PATTERSON,
CYRUS BROWN FOLLMER,	KIMBER MINUM PERSING,
CARRIE DUNBAR FORESMAN,	JEROME CRANMER SALSURY,
HELEN MARGARET GROFF,	JAMES RUSSELL SNYDER,
MARY ELIZABETH HARER,	DEAN DONNELL STURGIS,
LEWIS STOUT HEINEN,	GRACE ISABEL SUTTON,
HELEN JENKINS,	RICHARD J. W. TEMPLIN,
MARY LANGLEY JONES,	LOUIS NICOLI TRIPICIAN,
JOHN ROBERTS KURTZ,	SHAILER WARREN VENTRES,
RUTH SPRAGUE MATTERN,	EMMA ESTHER WEDDLE,
GEORGE FUNSTON MILLER,	RUTH WILLIAMS.

III. THE FIRST DEGREE IN BIOLOGY.

SAMUEL MARSHALL DAVENPORT.

IV. THE FIRST DEGREE IN CHEMICAL ENGINEERING.

MAURICE BACON COOK.

V. THE FIRST DEGREE IN CIVIL ENGINEERING.

WILLIAM CHALMERS ACHESON,	ROSCOE GRANGER DAVIS,
RAY PAUL BIGLER,	HAROLD WENDELL GIFFIN,
RUSSELL SAVIDGE CONRAD,	HILDRED HOWARD HANN,
KENNETH COLQUHOUN RITCHIE.	

VI. THE FIRST DEGREE IN ELECTRICAL ENGINEERING.

BRUCE EDWARD BUTT,	MILTON JARRETT NORMAN,
EDWIN CHARLES HAGEMANN,	NORMAN JACOB REHMAN,
BURTON FREDERICK LEWIS,	CLYDE EDWARD RUNCK,
PAUL BRENTON LEWIS,	HOMER MORRISON SANDERS,
STERLING RAYMOND MENSCH,	HAROLD EMERSON SMITH,
HIRAM PERCIVAL NORMAN,	LESTER ALBERT SWITZER,
HENRY CHARLES WOLFE.	

VII. THE FIRST DEGREE IN MECHANICAL ENGINEERING.

ESKEL VALENTINE ANDERSON,	THOMAS LEWIS JAMES,
JOHN JOSEPH CONWAY,	JOHN FREDERICK JEFFERY,
RUSSELL WILLIAM EVERETT,	CYRIL ELTON LEWIS,
CLARENCE OLIVER HARTMAN,	BAKER FAIRCHILD SPYKER,
CHARLES RHODES WRIGHT.	

DEGREE CONFERRED *HONORIS CAUSA*.

DOCTOR OF LAWS.

TASKER HOWARD BLISS, MAJOR-GENERAL UNITED STATES ARMY.

CERTIFICATES IN DOMESTIC SCIENCE.

ESTHER HANNA BAUMGARTNER,	GERTRUDE MARY MCGOEY,
MARY BARRICK BEATTY,	MARJORIE FERRIS McNALL,
FRANCES LEIGHTON BROWN,	MABEL DELIA MINCH,
RUTH MARIE CANNON,	JOSEPHINE FLORELLE READING,
MARGARET DOLPHIN,	MURIEL BELLE RIDER,
MARGARET HILL EVANS,	FAY MARGUERITE SCHOCH,
HELEN HADDEN,	GENEVIEVE CRAIG SHUTTERLY,
LEILA GWENDOLEN HANNA,	GRACE ELLEN STARR,
ZELDA JANE HAWES,	EVELYN HOPE VOSBURGH,
ETHEL MAY HEITER,	ANNA ANGELINE WAITE,
HELEN MAFFETT HERRIT,	MARGARET BRIGHT WALLACE,
ELIZABETH BELINDA LAIRD,	CARMEN CAMILLA WHITEBRED.

COMMENCEMENT ADDRESSES

June 4, 1916.

Baccalaureate Sermon.....	THE PRESIDENT
Sermon, Education Society.....	REV. ABNER J. DAVIES, A.M.
Address before the Alumni Association.....	SAMUEL Z. BATTEN, D.D.
Poem	SUZANNE WEDDELL
Commencement Address.....	PRESIDENT CLARENCE A. BARBOUR, D.D.

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Secretary, REV. LEWIS C. HYLBERT, A.B., Ningpo.

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Lewisburg Alumnæ Club.

President, DOROTHY WALLS, Lewisburg.

Secretary, ANNA CURZON JUDD, PH.M., Lewisburg.

NAMES OF STUDENTS.

GRADUATE STUDENTS.

NAME.	MAJOR SUBJECT.	RESIDENCE.
JOHN RANCK BELL, PH.B.,	<i>Philosophy.</i>	Lewisburg
DANIEL FLOYD K. BERTOLETTE, A.B.,	<i>Literature.</i>	Shamrock
JOHN BENJAMIN BOYER, SC.B.,	<i>Science.</i>	Milroy
MABEL MAY BROWN, A.B.,	<i>English.</i>	Clearfield
PERRY AQUILA CARIS, A.B.,	<i>Mathematics.</i>	Philadelphia
CLARENCE BARNABAS CARVER, SC.B.,	<i>Mathematics.</i>	Carmel, N. Y.
WILLIAM ADAM CAWLEY, SC.B.,	<i>Biology.</i>	Lewisburg
RAYMOND E. CROSS, SC.B.,	<i>Economics.</i>	Middletown, N. Y.
JOSEPH LESLIE CROWELL, A.B.,	<i>Philosophy.</i>	Barneгат, N. J.
RALPH FREDERICK DAVENPORT, PH.B.,	<i>Pedagogy.</i>	Carlisle
FRANK GARFIELD DAVIS, PH.B.,	<i>Pedagogy.</i>	Valdez, Alaska
ISAAC NEWTON EARLE, JR., A.B.,	<i>Greek.</i>	Lewisburg
FAYETTE CLINTON ESHELMAN, SC.B.,	<i>Biology.</i>	Franklin
WILLIAM HAYES GATEHOUSE, A.B.,	<i>History.</i>	Cumberland, Md.
WALTER SCOTT GEARHART, SC.B.,	<i>Civil Engineering.</i>	Manhattan, Kansas
MARWOOD BENJAMIN GLOVER, SC.B.,	<i>Jurisprudence.</i>	Collingdale

NAME.	MAJOR SUBJECT.	RESIDENCE.
HARRY ELMER GRESS, SC.B.,	<i>Pedagogy.</i>	Monessen
HORACE LEROY HALL, A.B.,	<i>Philosophy.</i>	Chester
DALE DAVIS HOLLENBAUGH, SC.B.,	<i>Economics.</i>	Williamsport
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Newark, N. J.
HARRY XING KELLY, A.B.,	<i>Philology.</i>	Philadelphia
MARY ANNA KUNKEL, A.B.,	<i>Literature.</i>	Lewisburg
CHARLES WALTER LOTTE, A.B.,	<i>French.</i>	Paterson, N. J.
MINNIE ETHEL MAYNARD, A.B.,	<i>Pedagogy.</i>	Williamsport
GILBERT JUDSON MEREDITH, SC.B.,	<i>Science.</i>	Woodbridge, N. J.
NORMAN GOULD OLIVER, A.B.,	<i>Theology.</i>	Evansville, Wis.
FRANK HALFPENNY PAINTER, PH.B.,	<i>Pedagogy.</i>	Jersey Shore
RUDOLPH PETERSON, SC.B.,	<i>Education.</i>	Cresson
GEORGE WILSON POTTS, A.B.,	<i>Science.</i>	Pittsburgh
ALBERT NORMAN REDELIN, SC.B.,	<i>Biology.</i>	Philadelphia
JESSE EARLE RILEY, A.B.,	<i>Economics.</i>	Philippi, W. Va.
FRED VALENTINE ROCKEY, A.B.,	<i>History.</i>	Liverpool
DAVIS CLIFFORD RUTH, A.B.,	<i>Latin.</i>	Philadelphia
CHARLES LOY SANDERS, A.B.,	<i>English.</i>	Germantown, Ohio
PAUL JASPER SANDERS, A.B.,	<i>Science.</i>	Summit, N. J.
GEORGE EDWARD SCHILLING, A.B.,	<i>Pedagogy.</i>	Franklin
ROBERT ROWE SELLERS, SC.B.,	<i>Civil Engineering.</i>	Gainesville, Fla.

NAME.	MAJOR SUBJECT.	RESIDENCE.
JOSEPH PARDOE SHEARER, SC.B.,	<i>Biology.</i>	Baltimore, Md.
GEORGE SALVADORE STEVENSON, SC.B.,	<i>Biology.</i>	Baltimore, Md.
EARL SCHNEIDER TEED, SC.B.,	<i>Chemistry.</i>	Wilkes-Barre
CHESTER JOSEPH TERRILL, A.B.,	<i>Economics.</i>	Albany, N. Y.
MARTHA JANE THOMAS, PH.B.,	<i>German.</i>	Frostburg, Md.
JESSE ROY TYSON, SC.B.,	<i>Civil Engineering.</i>	Norristown
KATHALYN VOORHIS, SC.B., M.D.,	<i>Science.</i>	Framingham, Mass.
ARTHUR DAVID WALTZ, SC.B.,	<i>Biology.</i>	Hepburnville
HARRY BRUNGART WEAVER, PH.B.,	<i>History.</i>	Meyersdale.
PAUL RAYMOND WENDT, SC.B.,	<i>Economics.</i>	Philadelphia

Graduate Students, 47.

THE SENIOR CLASS.

CLASS OF 1917.

NAME.	RESIDENCE.	ROOM.
MEREDITH LUFFBARY ABBOTT,	University Avenue <i>Glassboro, N. J.</i>	
MILES DOMER ACKERMAN,	Lewisburg <i>Turbotville.</i>	
WILLIAM ROY BAKER,	No. 3, East College <i>Blairsville.</i>	
GEORGE BARNHART,	No. 59, West College <i>Sunbury.</i>	
RUTH PAULINE BARTHOLD,	Women's College <i>Bethlehem.</i>	
LOUISE ANTOINETTE BASSELL,	Women's College <i>Philippi, W. Va.</i>	
WALTER CLARENCE BEAVER,	No. 11, East Wing <i>Oley.</i>	
FRANCIS JOSEPH BECKLEY,	University Avenue <i>Nanticoke.</i>	
HAROLD AMOS BEERS,	Walker Street <i>Watertown, Conn.</i>	
GEORGE THOMAS BENDER,	Lewisburg <i>Lewisburg.</i>	
FRED ELKANAH BENEDICT,	No. 114, East College <i>Canton.</i>	
ARNOLD LEIGH BENTON,	No. 29, East College <i>Bradford.</i>	
EUGENE PETER BERTIN,	No. 95, West College <i>Williamsport.</i>	
PAUL WHEELER BOGGESE,	No. 23, West Wing <i>Philippi, W. Va.</i>	
PETER PAUL BRANTLEY,	No. 31, East Wing <i>Schenectady, N. Y.</i>	
FRED CHARLES BRENNER,	South Third Street <i>Holidaysburg.</i>	
HELEN CHRISTINA BROWN,	Women's College <i>Morristown, N. J.</i>	
MARY MAGDALENE BUBB,	Women's College <i>Dalmatia.</i>	
CHARLES BUTCHINSKI,	No. 64, West College <i>Nanticoke.</i>	

NAME.	RESIDENCE.	ROOM.
LEROY PIERRE CALKIN,	<i>Atlantic City, N. J.</i>	South Third Street
JAMES ARLING CASE,	<i>Boonton, N. J.</i>	No. 60, East College
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GEORGE BECHT CHAMPION,	<i>Montoursville.</i>	University Avenue
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MARGARET MURRAY COLLINS,	<i>Lewisburg.</i>	Lewisburg
JEANNETTE COOKE,	<i>Haddonfield, N. J.</i>	Women's College
VERA QUINDARE COUCH,	<i>Avonmore.</i>	Women's College
WILLIAM HARVEY CRAIGHEAD,	<i>Elizabeth.</i>	Walker Street
MAURICE HOWARD CRYDER,	<i>Tyrone.</i>	University Avenue
RALPH BECKER DERR,	<i>Milton.</i>	South Third Street
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JOSEPH JAMES DIRZULAITIS,	<i>Mt. Carmel.</i>	No. 25, East Wing
ANNA EMELINE DOWNING,	<i>West Nanticoke.</i>	Water Street
DONALD ROSS DUNKLE,	<i>Lewisburg.</i>	Lewisburg
ALFRED ALLYN EARLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ARTHUR EYSTER,	<i>Fisher's Ferry.</i>	University Avenue
CARL DALIUS FELTON,	<i>Sunbury.</i>	No. 66, West College
RALEIGH MILTON FELTON,	<i>Connellsville.</i>	Walker Street
CHARLES HENRY WASHINGTON FISHER,	<i>Ashland.</i>	Lewisburg
HOWARD CHRISTOPHER FISHER,	<i>Shamokin Dam.</i>	No. 34, East College

NAME.	RESIDENCE.	ROOM.
BRUCE DALLAS GALBRAITH,	<i>Bridgeton, N. J.</i>	No. 8, West Wing
NELLYLOU GARDNER,	<i>Oxford, N. J.</i>	Women's College
CHARLES CLIFFORD GILLETTE,	<i>Rushville, N. Y.</i>	University Avenue
EARL LEROY GRACE,	<i>Penn Yan, N. Y.</i>	No. 90, West College
DONALD ALBERT HAMAN,	<i>Eagles Mere.</i>	No. 43, East College
ANNA ELLIS HANKINS,	<i>Havre de Grace, Md.</i>	Women's College
LILLIAN HELENA HANNOLD,	<i>Paulsboro, N. J.</i>	Women's College
FRANK SLAYMAN HARTMAN,	<i>Elysburg.</i>	No. 8, East College
SARAH ALICE HASLAM,	<i>Philadelphia.</i>	Women's College
ALBERT WAYNE HATFIELD,	<i>Newark, N. J.</i>	University Avenue
CHARLES JOSEPH HAY,	<i>Pottsville.</i>	No. 108, East College
DONALD DAVID HAYES,	<i>Hartleton.</i>	South Third Street
JOHN ATHERTON HEBERLING,	<i>Shickshinny.</i>	St. George Street
HENRIETTA HEINSLING,	<i>Altoona.</i>	Women's College
HAROLD SAMUEL HOPLER,	<i>Williamsport.</i>	St. George Street
EDITH MCCLONG HORTON,	<i>Millville, N. J.</i>	Women's College
MARY ELIZABETH HUMPHREYS,	<i>Nanticoke.</i>	Women's College
ALICE SUSANNAH JOHNSON,	<i>Lewisburg.</i>	Lewisburg
AILEEN AUDREY JOHNSTON,	<i>Avonmore.</i>	Women's College
ELLA CORINNE JONES,	<i>Montrose.</i>	Women's College
DANIEL WEBSTER KEARNEY,	<i>Shamokin.</i>	No. 120, East College

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CHARLES CLEMENTS KEPPLE,	<i>Greensburg.</i>	No. 93, West College
EDWARD ANDREW KITLOWSKI,	<i>Nanticoke.</i>	No. 88, West College
HOLMAN GEORGE KNOUSE,	<i>Sunbury.</i>	No. 22, West Wing
CLARENCE MACLAY KRINER,	<i>Waynesboro.</i>	University Avenue
ARIAL KROMER,	<i>Milton.</i>	Women's College
HELEN ELIZABETH KROUSE,	<i>Altoona.</i>	Women's College
ELIZABETH BOYD LEHR,	<i>Haddonfield, N. J.</i>	Women's College
HOWARD CHESTER LIEBENSBERGER,	<i>Williamsport.</i>	St. George Street
HENRY TUTTLE LOFFT,	<i>Collingswood, N. J.</i>	No. 72, West College
ROYDEN STROVEL MATLACK,	<i>Haddon Heights, N. J.</i>	University Avenue
CHARLES DAVID MAURER,	<i>Shamokin.</i>	No. 62, East College
JAMES ROBERT MCCORMICK,	<i>Tyrone.</i>	University Avenue
LORA ELLEN MCQUAY,	<i>Emporium.</i>	Women's College
DELETH EBER MELLINGER,	<i>Ephrata.</i>	Lewisburg
FELIX VALOIS MIKOLAJCZAK,	<i>Nanticoke.</i>	No. 18, Academy
DAVID LANDERS MINK,	<i>Sharon.</i>	Walker Street
OLIVE EWING MOORE,	<i>Bridgeton, N. J.</i>	Women's College
ST. CLAIR MURRAY,	<i>Binghamton, N. Y.</i>	University Avenue
REIGNALD SPOFFORD NEWBURY,	<i>Point Pleasant, N. J.</i>	Lewisburg
JESSE WARREN NOLL,	<i>Lewisburg.</i>	Lewisburg
EDNA ADETA OVERFIELD,	<i>West Pittston.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
JEANNETTE CAROLYN OWENS,	<i>Lewisburg.</i>	Lewisburg
GEORGE GRANTHAM PAINTER,	<i>Muncy.</i>	St. George Street
SARA ASENATH PARK,	<i>Ben Avon.</i>	Women's College
EARL STEWARD PEDIGO,	<i>Corry.</i>	South Third Street
STERLING THOMAS POST,	<i>Dalton.</i>	Walker Street
CHARLES WILBUR POTTER,	<i>Shickshinny.</i>	No. 10, East Wing
GROVER CLEVELAND POUST,	<i>Muncy.</i>	No. 28, East College
KATHRYN ELIZABETH REDELIN,	<i>Freeland.</i>	Women's College
MARY ELIZABETH REESE,	<i>Lansford.</i>	Women's College
ARCHIBALD MCCORMICK RIPPPEL,	<i>Milton.</i>	Walker Street
FORREST GLENN ROGERS,	<i>Nittany.</i>	No. 9, East Wing
HUGH THOMPSON RUSSELL,	<i>Mt. Pleasant.</i>	No. 17, East College
MERWYN CRANMER SCOTT,	<i>Wilmington, Del.</i>	No. 43, West College
SAMUEL LEROY SEEMAN,	<i>Oakmont.</i>	Lewisburg
RUSSELL M. SHEARER,	<i>Northumberland.</i>	No. 30, East College
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HARLEY NEVIN SHIPMAN,	<i>Sunbury.</i>	Lewisburg
FRANCES H. SILBERSTEIN,	<i>Philadelphia.</i>	Women's College
CHARLES BUNNELL SIPLEY,	<i>Lewisburg.</i>	Lewisburg
CHARLES AUSTIN SOARS,	<i>Philadelphia.</i>	University Avenue
IRWIN POTTER SOWERS,	<i>Pottersville, N. J.</i>	No. 19, East Wing

NAME.	RESIDENCE.	ROOM.
CLARA RAY SPEARE,	<i>Lewisburg.</i>	Lewisburg
RAYMOND EYLER SPRENKLE,	<i>Waynesboro.</i>	No. 71, West College
CLINTON IRWIN SPROUT,	<i>Picture Rocks.</i>	No. 90, East College
WARNER SPURGEON SQUIBB,	<i>McKeesport.</i>	Walker Street
FRANK EDWARD STETLER,	<i>Lewisburg.</i>	Lewisburg
EBER NELSON SWOPE,	<i>Waynesboro.</i>	No. 71, West College
RICHARD EVELEIGH THOMAS,	<i>Nanticoke.</i>	No. 81, West College
SARA EVANS THOMPSON,	<i>Sewell, N. J.</i>	Women's College
MARIE VOLKMAR,	<i>Williamsport.</i>	Women's College
ETHEL VIOLA WARD,	<i>Lewisburg.</i>	Lewisburg
CLARENCE REUBEN WEBER,	<i>Philadelphia.</i>	No. 65, East College
JOSEPH CHARLES WEIRICK,	<i>Ashland.</i>	Fourth Street
EARLE BAXTER WEST,	<i>Apollo.</i>	Lewisburg
YEURITH LEVINIA WESTBAY,	<i>Elizabeth.</i>	Women's College
AMANDA LAURA WHITAKER,	<i>Millville, N. J.</i>	Women's College
FRANK E. WILLIAMS,	<i>Nanticoke.</i>	No. 62, West College
HARRY GILBERT WILLSON,	<i>Williamsport.</i>	No. 9, East Wing
ARTHUR ROLLAND YON,	<i>Atlantic City, N. J.</i>	South Third Street

Seniors, 121.

THE JUNIOR CLASS.

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NAME.	RESIDENCE.	ROOM.
ALVIN JACOB ADAMS,	<i>Bellaire, Ohio.</i>	Walker Street
CHARLES JOSEPH ANCHOR,	<i>Philadelphia.</i>	No. 71, East College
HULDA HOUSTON ARTHUR,	<i>Savannah, Ga.</i>	Women's College
EDWIN EWART AUBREY,	<i>Kingston.</i>	No. 15, West Wing
WILLIAM PALMER BACHMAN,	<i>Sunbury.</i>	No. 84, West College
BRUCE LEROY BANKS,	<i>Atlantic City, N. J.</i>	South Third Street
FRED BARNHART BAUMAN,	<i>Danville.</i>	No. 80, East College
RALPH BERNHEISEL BEARD,	<i>Green Park.</i>	No. 17, West Wing
MARY BARRICK BEATTY,	<i>Lewisburg.</i>	University Avenue
JOHN EDGAR BENNETT,	<i>Port Monmouth, N. J.</i>	No. 90, West College
HIRAM JOHN BLOOM,	<i>Sunbury.</i>	South Third Street
RUSSELL ALBERT BOSTIAN,	<i>West Milton.</i>	No. 8, West Wing
DAVID NATHANIEL BOSWELL,	<i>Lewisburg.</i>	Lewisburg
MARY NINA BOSWELL,	<i>Lewisburg.</i>	Lewisburg
WALTER JACOB BOWER,	<i>Herndon.</i>	South Third Street
RUSSELL ELIAS BOYER,	<i>Sunbury.</i>	University Avenue
ROBERT LEON BUCHER,	<i>Watsonstown.</i>	Watsonstown
HARRY SAMUEL CASSLER,	<i>Lewisburg.</i>	Lewisburg
ELIZABETH BIRD CHAMPION,	<i>Montoursville.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
HAZARD CLINTON CHASE,	<i>Clearfield.</i>	No. 51, West College
LEROY GLEASON CLARK,	<i>Canton.</i>	No. 93, East College
MARGARET COATES,	<i>Plymouth.</i>	Women's College
PAUL HACKETT COLLINS,	<i>Salem, N. J.</i>	Walker Street
RAYMOND WESTERVELT COOPER,	<i>Paterson, N. J.</i>	No. 119, East College
DAYMOND WALLACE COPELAND,	<i>Lindhurst, N. J.</i>	No. 91, West College
HARVEY DALE CRAWFORD,	<i>Brookville.</i>	South Third Street
CHARLES WALTER DEAN,	<i>South Williamsport.</i>	No. 68, West College
CLIFFORD COATES DECK,	<i>Trenton, N. J.</i>	No. 69, West College
ALFRED RAPHAEL DELAND,	<i>Watertown, Conn.</i>	No. 72, East College
MARY DEWEES,	<i>Montrose.</i>	Women's College
HELENE FORSYTH DIFFENDAFER,	<i>Nanticoke.</i>	Women's College
ADRIAN JAMES DOLPHIN,	<i>Harrison, N. J.</i>	No. 4, East College
ROBERT DONALDSON,	<i>DuBois.</i>	No. 58, East College
ROBERT SAXTON DOWNING,	<i>Milford, N. Y.</i>	No. 63, East College
MARION MARMADUKE EARLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ABRAM EATON,	<i>Harrisburg.</i>	No. 12, West Wing
ALBERT WINSLOW ELLIOTT,	<i>Fayette City.</i>	Walker Street
REYNOLDS FRAMPTON ELLIOTT,	<i>Clarion.</i>	University Avenue
THOMAS AUSTIN ESHELMAN,	<i>Franklin.</i>	No. 93, East College
ETHEL RUTH FARLEY,	<i>Mifflinburg.</i>	Mifflinburg

NAME.	RESIDENCE.	ROOM.
MERRILL FRANKLIN FEAIRHELLER,	<i>Spring City.</i>	University Avenue
EDITH VIRGINIA FOCHT,	<i>Lewisburg.</i>	Lewisburg
HENRY LAWRENCE FONDA,	<i>Milton.</i>	No. 38, West College
GROVER CLEVELAND FORESMAN,	<i>New Columbia.</i>	New Columbia
MABEL HAIN FRITZ,	<i>West Reading.</i>	Women's College
IRENE MARIE FRYE,	<i>Monessen.</i>	Women's College
EDITH GABEL,	<i>Richlandtown.</i>	Women's College
LLOYD LOY GARNER,	<i>Harrisburg.</i>	No. 5, West College
HAZEL MARIE GAY,	<i>Homer, N. Y.</i>	Women's College
WILLIAM ALLISON GEARY,	<i>Lock Haven.</i>	No. 103, East College
WILLIAM JOHN GEATING,	<i>Ashland.</i>	No. 31, East College
HAROLD DICKINSON GERMER,	<i>Harrisburg.</i>	No. 116, East College
HENRY ALLEN GITTLEMAN,	<i>Reading.</i>	South Third Street
JOHN STEINER GOLD,	<i>Muncy.</i>	No. 20, West Wing
HERBERT CARL GRICE,	<i>Scranton.</i>	University Avenue
ELIZABETH LOUISE HAHN,	<i>Meshoppen.</i>	Women's College
STANLEY NEWTON HARRIS,	<i>Lewisburg.</i>	University Avenue
ELLERY HALE HARVEY,	<i>Lewisburg.</i>	Lewisburg
EMERSON ROY HASSRICK,	<i>Muncy.</i>	Waiker Street
WILLIAM ROY HECKENDORN,	<i>Duncannon.</i>	Lewisburg
EMERSON MONROE HECKERT,	<i>Fisher's Ferry.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
FRANCIS LUTHER COULSON HEIKES,	<i>Dillsburg.</i>	No. 2, West Wing
LESTER ADAM HERB,	<i>Snydertown.</i>	No. 23, West Wing
ERNEST WELLINGTON HEWITT,	<i>Mifflinburg.</i>	No. 51, West College
ETHEL REBECCA HEWITT,	<i>Mifflinburg.</i>	Mifflinburg
WILLIAM REED HINDMAN,	<i>Clarion.</i>	Lewisburg
EMIL WILLIAM HOLINGER,	<i>Philadelphia.</i>	Walker Street
JENNINGS HOWARD HORNBERGER,	<i>Milton.</i>	Milton
JOSIAH LESTER HOUSER,	<i>Milroy.</i>	Walker Street
KARL KELCHNER HULLEY,	<i>Philippi, W. Va.</i>	University Avenue
NORMAN KEEN HURLEY,	<i>Salem, N. J.</i>	Walker Street
CHARLES VERNON IREDELL,	<i>Painted Post, N. Y.</i>	St. George Street
NERISSA DAGMAR JAMES,	<i>New York, N. Y.</i>	Women's College
MILLER ALANSON JOHNSON,	<i>Lewisburg.</i>	South Third Street
WILLIAM THOMAS JOHNSON,	<i>Sunbury.</i>	Sunbury
EVERETT THOMAS JONES,	<i>Scranton.</i>	University Avenue
JOHN MCKEE JONES,	<i>Aliquippa.</i>	No. 17, West College
CHESTER SCOTT KEEFER,	<i>Altoona.</i>	University Avenue
CHARLES ANDREW KISSELL,	<i>Lock Haven.</i>	No. 29, West Wing
DONALD WILLIAM KORTH,	<i>New York, N. Y.</i>	University Avenue
AILEEN MARIE LARSON,	<i>Kane.</i>	Women's College
FRANK AMES LAWRENCE,	<i>Harrisburg.</i>	No. 6, West College

NAME.	RESIDENCE.	ROOM.
WALTER LARRISON LEES,	<i>Leechburg.</i>	Lewisburg
SAMUEL DAVID LENOX,	<i>Trenton, N. J.</i>	No. 58, West College
JOSEPH STANFORD LEPLEY,	<i>Winfield.</i>	No. 2, East College
KATHERINE MARIE LERMANN,	<i>Monessen.</i>	Women's College
DAGMAR ELLEN LETH,	<i>Trenton, N. J.</i>	Women's College
EMMA KATHERINE LEVEGOOD,	<i>Jersey Shore.</i>	Women's College
MARSH CHARLES LEWISSON,	<i>Milton.</i>	Milton
LESTER EUGENE LIGHTON,	<i>Williamsport.</i>	No. 2, West Wing
BARTON HIRST MACKEY,	<i>Oxford.</i>	South Third Street
HENRY THOMAS MARSHALL,	<i>South Brownsville.</i>	South Third Street
CARLISLE WEAVER MASON,	<i>South Williamsport.</i>	No. 8, West Wing
JAMES STOUGHTON MATHERS,	<i>Lewisburg.</i>	Market Street
MARGARET GEISSENHAINER MATTERN,	<i>Reading.</i>	Women's College
MARGUERITE FRANCES MAY,	<i>Johnsonburg.</i>	Women's College
DOROTHY INEZ MCCLINTIC,	<i>New York, N. Y.</i>	Women's College
EVELYN MCGANN,	<i>Lewisburg.</i>	Lewisburg
DOROTHEA FRANCIS MEEK,	<i>Allenwood.</i>	Allenwood
ELORINE MICHAEL,	<i>Laceyville.</i>	Women's College
GEORGE HOBART MILES,	<i>Portage.</i>	Walker Street
JAMES LAFAYETTE MILLER,	<i>Cape May, N. J.</i>	St. George Street
IRIAM AVIS MINCH,	<i>Tyler Hill.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
ROBERT STORK MOORE,	<i>Bluff Point, N. Y.</i>	No. 12, East Wing
CLYDE FRANKLIN MOWRER,	<i>Watson town.</i>	No. 7, West College
MALCOLM EUGENE MUSSER,	<i>Lewisburg.</i>	South Third Street
ROBERT MITCHELL NEAL,	<i>Rio Grande, N. J.</i>	No. 109, East College
BOYD LAWRENCE NEWCOMB,	<i>Newport, N. J.</i>	South Third Street
LEON HENRY NOLL,	<i>Lewisburg, R. D. 2.</i>	Lewisburg
HENRY SHERMAN NORTHRUP,	<i>Monroeton.</i>	No. 17, East Wing
ARTHUR ENOCH PAULHAMUS,	<i>Cogan Station.</i>	No. 10, East Wing
SIDNEY JAMES PEALE,	<i>Eagles Mere.</i>	No. 43, East College
MARGARET BAINBRIDGE PHILLIPS,	<i>Wilkes-Barre.</i>	North Second Street
JESSIE IRENE PÖTTS,	<i>Greensburg.</i>	Women's College
STEPHEN FRALEY PUFF,	<i>Philadelphia.</i>	No. 110, East College
EVELYN EDWINA PUGH,	<i>Oxford.</i>	Women's College
MARGUERITE ISABEL QUIGLEY,	<i>Williamsport.</i>	Women's College
BRUCE OLIVER RANCK,	<i>New Columbia.</i>	No. 10, West College
EARL PRESTON RAUB,	<i>Lewisburg.</i>	Seventh Street
ALLEN SNADER REDDIG,	<i>Adamstown.</i>	No. 10, West Wing
CAMILLA BUNKER REED,	<i>Holidaysburg.</i>	Women's College
CHARLES AFFLERBACH REED,	<i>Mt. Ephraim, N. J.</i>	Lewisburg
FRANK HENRY RITTER,	<i>Paterson, N. J.</i>	University Avenue
JAMES EDWARD ROBBINS,	<i>Lewisburg.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
HOWARD LANDIS ROSENBERGER,	<i>Schwenksville.</i>	No. 91, East College
ALVIN LAMAR RUMMER,	<i>Lock Haven.</i>	No. 16, Academy
PAUL SANDEL,	<i>Lewisburg.</i>	Lewisburg
JULIUS FREDERICK SEEBACH,	<i>Holidaysburg.</i>	No. 16, East Wing
HELEN LORAIN SHAFER,	<i>Lewisburg.</i>	Lewisburg
FLORENCE PAULINE SHALTER,	<i>Reading.</i>	Women's College
FRAZIER HERBERT SHEFFER,	<i>Milroy.</i>	Walker Street
DAVID CARLTON SHILLING,	<i>Sharon.</i>	No. 80, East College
WALTER STANLEY SHOFFSTALL,	<i>Kulpmont.</i>	No. 118, East College
LOUIS WALTON SIPLEY,	<i>Lewisburg.</i>	Lewisburg
ORA BEATRICE SMITH,	<i>White Deer.</i>	White Deer
MARY SPEECE,	<i>Pittston.</i>	Women's College
SAMUEL DALE SPOTTS,	<i>Lewisburg.</i>	North Fifth Street
VAN KIRK STANSBURY,	<i>Carbondale.</i>	No. 16, West College
DANIEL RIDGWAY STEELE,	<i>Newton, N. J.</i>	Lewisburg
ELIZABETH WARD STEPHENS,	<i>Lewisburg.</i>	Lewisburg
LEROY G. STOLZ,	<i>Reading.</i>	No. 88, East College
EVERETT EVERSON STONE,	<i>Carbondale.</i>	No. 13, West Wing
REXFORD ERVIN STONE,	<i>Carbondale.</i>	University Avenue
ALEXANDER STORER,	<i>Pitman, N. J.</i>	South Third Street
CANDALL ERNEST STOVER,	<i>Mifflinburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
NATHAN TEITELBAUM,	<i>Northumberland.</i>	No. 21, West College
WILLIAM TORKINGTON,	<i>Wellsboro.</i>	No. 15, East College
WILLIAM EDMUNDSON TRIMBLE,	<i>McKeesport.</i>	No. 70, West College
ROBERT CHARLES UMLAUF,	<i>Muncy.</i>	No. 92, East College
HIRAM JACOB WAGNER,	<i>Smithton.</i>	Walker Street
JAMES ROYALL WALDRON,	<i>Englewood, N. J.</i>	No. 15, West College
STUART MITCHELL WALTER,	<i>Mt. Carmel.</i>	Lewisburg
MIRIAM GRAYCE WEAVER,	<i>Rebersburg.</i>	Lewisburg
MARTHA EVELYN WETTLAUFER,	<i>Williamsport.</i>	Women's College
FRED NIEWEG WILLIAMSON,	<i>Lincoln University.</i>	No. 12, East Wing
JOHN CLAYTON YON,	<i>Atlantic City, N. J.</i>	South Third Street
GEORGE RAYMOND ZIEGENFUSS,	<i>Lavelle.</i>	St. George Street

Juniors, 157.

THE SOPHOMORE CLASS.

CLASS OF 1919.

NAME.	RESIDENCE.	ROOM.
SAMUEL ABRAMS,	<i>Milton.</i>	No. 13, East Hall
MARTHA ESTHER ACHENBACH,	<i>Reading.</i>	Women's College
GABRIEL LEROY ADAMS,	<i>Herndon.</i>	South Third Street
MARGARET ELIZABETH ALLEN,	<i>Allenwood.</i>	Allenwood
CHARLES LONG AMER,	<i>Williamsport.</i>	University Avenue
GRACE ELEANOR AMES,	<i>Milton.</i>	Milton
HARRY HERMAN ANGEL,	<i>Williamsport.</i>	Williamsport
EDWARD THOMAS ASHMAN,	<i>Nanticoke.</i>	University Avenue
VINCENT ARTHUR BALDAUF,	<i>Reynoldsville.</i>	Lewisburg
CHARLES MCKNIGHT BASHORE,	<i>Mifflintown.</i>	No. 81, East College
GEORGE HAROLD BEATTIE,	<i>Shippensburg.</i>	No. 35, East College
LEWITT KIEFFER BOTTS,	<i>Milton.</i>	No. 14, East College
IRIAM NEFF BRIDGE,	<i>Jersey Shore.</i>	Women's College
MARGARET JANE BUCK,	<i>Weldon.</i>	Women's College
EDWIN CARSWELL,	<i>Williamsport.</i>	Women's College
ROBERT GONZALES CARULLA,	<i>Santiago, Cuba.</i>	South Third Street
CHARLES THERON CARVOLTH,	<i>Peckville.</i>	No. 85, West College
JOHN ELMER CATHERMAN,	<i>Hartleton.</i>	South Third Street
ALEXANDER HILL CHALFANT,	<i>Brownsville.</i>	Walker Street

NAME.	RESIDENCE.	ROOM.
GOLDA CLARK,	<i>Jersey Shore.</i>	Women's College
FLORENCE ADELAIDE CLEARY,	<i>Dunmore, Pa.</i>	Women's College
THOMAS COOPER COCKILL,	<i>Pottsville.</i>	No. 25, East College
HELEN COOPER,	<i>Brockwayville.</i>	Women's College
RUTH COOPER,	<i>Brockwayville.</i>	Women's College
RAYMOND JOHN CORNISH,	<i>Carbondale.</i>	No. 14, East Wing
ERNEST JUDSON CRUSE,	<i>Picture Rocks.</i>	No. 87, East College
EMERSON COLLINS CUPP,	<i>Milton.</i>	Walker Street
CHARLES HARRIS DAVIES,	<i>Lewisburg.</i>	University Avenue
ALDEN EUGENE DAVIS,	<i>Dickson City.</i>	No. 61, West College
CLARENCE ANDERSON DAVIS,	<i>Nanticoke.</i>	No. 20, East College
JOSEPH DAYKIN DENT,	<i>Pittsburgh.</i>	Lewisburg
FLORENCE MAY DERSHEIMER,	<i>Tunkhannock.</i>	Women's College
HARVEY CARL DETWILER,	<i>Norristown.</i>	South Third Street
HILDA ELIZABETH DINTERMAN,	<i>Spring Grove.</i>	Women's College
MARY MARGUERITE DOWNER,	<i>Glassboro, N. J.</i>	Women's College
FREDERICK EUGENE DUFFEE,	<i>Franklin.</i>	No. 14, West College
ESTHER CAVIN EDGE,	<i>Jeannette.</i>	Women's College
MABELLE ALICE EEDE,	<i>Ballston Spa, N. Y.</i>	Women's College
CHARLES MALCOLM EMERICK,	<i>Nittany.</i>	No. 27, West Wing
STEWART ALBRIGHT EPLER,	<i>Reading.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
LUTH EVELYN FARQUHAR,	<i>West Brownsville.</i>	Women's College
THEL MARY FELTON,	<i>Connellsville.</i>	Women's College
AIL MYRA FELTON,	<i>Connellsville.</i>	Women's College
LICE CAREY FERRIS,	<i>Philadelphia.</i>	Women's College
MARGARET MARY FINERTY,	<i>Dunmore.</i>	Women's College
ORMAN TURNER FINGER,	<i>Steelton.</i>	No. 48, East College
AN OLGA FLANAGAN,	<i>Pittsburgh.</i>	Women's College
AYDEE ELINOR FRANCIS,	<i>Taylor.</i>	Women's College
MARRY CLARENCE FRIES,	<i>Mercersburg.</i>	No. 19, West College
ENE JEMIMA FRITZ,	<i>Trevorton.</i>	Women's College
HN ROY GAENZLE,	<i>Reading.</i>	Lewisburg
VID CHRISTIAN GALL, JR.,	<i>Philadelphia.</i>	No. 19, West Wing
BERT LESLIE GANDY,	<i>Cape May Court House, N. J.</i>	No. 21, East Wing
THUR BATEMAN GANDY,	<i>Bridgeton, N. J.</i>	No. 77, West College
EBER LATCHA GERHART, JR.,	<i>Lewisburg.</i>	Lewisburg
EROLD NAPOLEON GILBERT,	<i>Williamsport.</i>	No. 39, East College
ANES MCDOWELL GILMOUR,	<i>Hawthorne, N. J.</i>	Women's College
ERL GEORGE GOERDEL,	<i>Mifflinburg.</i>	Mifflinburg
INE ELSIE GOSSWEILER,	<i>Allentown.</i>	Women's College
MRY EDNA GROVE,	<i>West Milton.</i>	West Milton
SNANNAH DUNKLE GROVE,	<i>West Milton.</i>	West Milton

NAME.	RESIDENCE.	ROOM.
META FRANCES HALDEMAN,	<i>Ivyland.</i>	Women's College
VORIS BLAINE HALL,	<i>Montgomery.</i>	No. 33, East College
HOWARD JUDSON HANN,	<i>Andover, N. Y.</i>	No. 1, East Wing
HOWARD LAVERNE HARER,	<i>Williamsport.</i>	No. 30, West Wing
THOMAS RUSSELL HEDGE,	<i>Scenery Hill.</i>	No. 79 East College
KENNETH CARSWELL HEINRICH,	<i>Brockport, N. Y.</i>	Lewisburg
JOHN CROWTHER HENDREN,	<i>Philadelphia.</i>	No. 23, East College
JAMES RUSSELL HERMAN,	<i>Edwardsville.</i>	No. 15, West Wing
EARL BUCHER HERTZLER,	<i>Richland.</i>	No. 47, West College
IRMA LENORE HESS,	<i>East Downingtown.</i>	Women's College
FRANCES MAY HILGERT,	<i>Nicholson.</i>	Women's College
KATHERINE BISHOP HOFF,	<i>Reading.</i>	Women's College
HELEN ROBERTA HOFFA,	<i>Lewisburg.</i>	Lewisburg
CLIFFORD AMBROSE HOLLERAN,	<i>Watertown, Conn.</i>	Walker Street
WILLIAM FREDERICK HOLSING,	<i>Canonsburg.</i>	No. 48, West College
MARION ELINOR HYATT,	<i>York.</i>	Women's College
GEORGE CONN JACO,	<i>Uniontown.</i>	South Third Street
GEORGE FREDERICK JAMMER,	<i>Trenton, N. J.</i>	No. 21, West Wing
FRANKLIN DELAVERGNE JONES,	<i>Nanticoke.</i>	No. 63, West College
EUGENE KALLAY,	<i>Leechburg.</i>	University Avenue
DOROTHY BETTY KANTER,	<i>Wilkes-Barre.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
JULIA SOPHIA KARMILOWICZ,	<i>Kingston.</i>	Women's College
ELIZABETH MOUNCE KATES,	<i>Willow Grove.</i>	Women's College
RAYMOND DEWITT KLINE,	<i>Winfield.</i>	Winfield
MARJORIE REBECCA KOSTENBADER,	<i>Lewisburg.</i>	Lewisburg
CHARLES BUNNELL KREITNER,	<i>Honesdale.</i>	No. 49, West College
GEORGE MERRILL KUNKLE,	<i>Lewisburg.</i>	Lewisburg
DONALD SHEEDER LAHER,	<i>Everett.</i>	University Avenue
NAOMI B. LANE,	<i>Brockwayville.</i>	Women's College
ROSEBETH BEAUMONT LAWRENCE,	<i>Butler, N. J.</i>	Women's College
HESTER ROBERT LEABER,	<i>Williamsport.</i>	No. 28, West Wing
LEVIRA BURLAND LEWIS,	<i>St. Clair.</i>	Women's College
RAYMOND PLANK LEWIS,	<i>Bridgeton, N. J.</i>	No. 14, West Wing
DONALD LOSE,	<i>Williamsport.</i>	No. 9, East College
JAMES WILLIAM LOWRY,	<i>Uniondale.</i>	No. 9, West Wing
THOMAS JAMES MANGAN,	<i>Charleroi.</i>	Lewisburg
BENJAMIN MARKOWITZ,	<i>Pottstown.</i>	No. 19, West Wing
DAVID JAMES MARTIN,	<i>Scranton.</i>	University Avenue
RICHARD ARMSTRONG MASON,	<i>Boise, Idaho.</i>	University Avenue
WILLIAM WALLACE MASTERTON,	<i>Paterson, N. J.</i>	No. 75, West College
FRANCIS PATRICK McDERMOTT,	<i>Houtzdale.</i>	University Avenue
ARTHUR DAVID MCKINLEY,	<i>Sharon.</i>	No. 21, East College

NAME.	RESIDENCE.	ROOM.
MARGARET SALOME McLAUGHLIN,	<i>West Newton.</i>	Women's College
MARY MATILDA McLAUGHLIN,	<i>West Newton.</i>	Women's College
RUTH ADELIA MINNIG,	<i>West Hazleton.</i>	Women's College
CHARLES WILLIAM MITCHELL,	<i>Milroy.</i>	No. 16, West Wing
CHARLES BYRON MOORE,	<i>Reynoldsville.</i>	Lewisburg
GWYLADYS RUTH MORGAN,	<i>Franklin.</i>	Women's College
SIMON THOMAS MORGAN,	<i>Paterson, N. J.</i>	No. 21, West Wing
NEWTON FRANKLIN NEWMAN,	<i>Lewisburg.</i>	Lewisburg
KENNETH WILSON OAKLEY,	<i>Manasquan, N. J.</i>	No. 11, West Wing
THOMAS MAURICE ORCHARD,	<i>Carbondale.</i>	University Avenue
HOWARD READING PARS,	<i>Williamsport.</i>	No. 30, West Wing
ELIZABETH McLEAN PATERSON,	<i>Montgomery.</i>	Montgomery
WILLIAM JAMES PEARSON,	<i>Scranton.</i>	Walker Street
EMERSON VINCENT PECK,	<i>Findley Lake, N. Y.</i>	No. 11, West Wing
HAYES LEROY PERSON,	<i>Williamsport.</i>	No. 28, West Wing
JAMES KANE PETTITE,	<i>New York, N. Y.</i>	Walker Street
JAMES CRAVEN PIERCE,	<i>Reading.</i>	University Avenue
HARRY EUGENE POTTS,	<i>Greensburg.</i>	No. 76, West College
ÆLRED LEO QUINN,	<i>Great Neck, L. I.</i>	No. 61, East College
MARGARETTA BARNETT REED,	<i>Harrisburg.</i>	Women's College
FRANK HEILMAN RIALE,	<i>South Williamsport.</i>	No. 52, West College

NAME.	RESIDENCE.	ROOM.
FRANK WESLEY RORABACH,	<i>Lewisburg.</i>	Lewisburg
NELSON SAMUEL ROUNSLEY,	<i>Millerstown.</i>	No. 27, West Wing
CHESTER FRANKLIN SCHROYER,	<i>Carroll.</i>	No. 15, East Wing
GURNEY CARL SEEBER,	<i>Milford, N. Y.</i>	No. 64, East College
HERMAN DEANE SHULTZ,	<i>Mooresburg.</i>	No. 13, East Hall
KARL DAVID SMITH,	<i>Catawissa.</i>	No. 16½, East Wing
SAMUEL JACOB SMITH,	<i>Tylersville.</i>	No. 15, East Wing
THELORA THELMA SMITH,	<i>Milton.</i>	Milton
ERNEST FREDERICK SONDER,	<i>South Williamsport.</i>	No. 54, West College
ELIZABETH FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Lewisburg
GLADYS ESTHER STANTON,	<i>Lewisburg.</i>	Lewisburg
GEORGE ALLEN STARKWEATHER,	<i>Carbondale.</i>	No. 14, East College
LUTHER STEIN,	<i>Lewisburg.</i>	Lewisburg
CHAROLD ANDREW STEWART,	<i>Ashtabula, Ohio.</i>	No. 14, West Wing
EDWIN ERNEST SWAGLER,	<i>Scenery Hill.</i>	No. 89, East College
EILEEN ELIZABETH SWARTZ,	<i>Milton.</i>	Milton
MARGUERITE WATSON TAGGART,	<i>Watsonstown.</i>	Women's College
GARRY VERNON THOMAS,	<i>Greenville.</i>	No. 51, East College
CATHERINE GEHRETT THOMPSON,	<i>Reedsville.</i>	Women's College
RAYMOND DELLY TICE,	<i>Quakertown.</i>	University Avenue
EILEEN GLADYS VANDINE,	<i>Hazleton.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
CHARLES BRIMMER WAINWRIGHT,	<i>Lewisburg.</i>	Lewisburg
HENRY MEYER WEBER,	<i>Mt. Ranier, Md.</i>	No. 32, West Wing
CLYDE EARL RUSSELL WENRICH,	<i>Sinking Spring.</i>	No. 10, West Wing
WALTER SCOTT WHITE,	<i>Honeybrook.</i>	University Avenue
HAZEL WILLIAMSON,	<i>Charleroi.</i>	Women's College
BENJAMIN JAMES WILSON,	<i>West Pittston.</i>	No. 17, East Wing
KENNETH CARLISLE WINSOR,	<i>Norwich, N. Y.</i>	No. 22, East College
RAYMOND A. WITCHEY,	<i>Osceola Mills.</i>	No. 16, East Wing
CLYDE WILLIAM WITHINGTON,	<i>Snydertown.</i>	Snydertown
LEONARD F. WORTHINGTON,	<i>Eagles Mere.</i>	No. 42, East College
ANTHONY ENOCH WYDANOVICH,	<i>Mt. Carmel.</i>	No. 25, East Wing
EMMA IRENE YARNALL,	<i>Lewisburg.</i>	Lewisburg
CHARLES OSCAR YODER,	<i>Lewisburg.</i>	Lewisburg

Sophomores, 159.

FRESHMAN CLASS.

CLASS OF 1920.

NAME.	RESIDENCE.	ROOM.
THOMAS WESLEY AGNEW,	<i>Brookville.</i>	No. 10, East College
ANTHONY DANIEL AMERISE,	<i>Hazleton.</i>	No. 78, East College
JUDSON MYRON ASH,	<i>West Pittston.</i>	No. 11, West College
WILLIAM WESLEY BAIRD,	<i>Reedsville.</i>	No. 16, West Wing
JOHN NEVIN BAUMAN,	<i>Danville.</i>	No. 86, East College
MORGAN N. BEECH,	<i>Edwardsville.</i>	No. 8, West College
ROBERT KINSLOE BELL,	<i>Mt. Union.</i>	No. 42, West College
GEORGE NORMAN BENJAMIN,	<i>Chester.</i>	No. 55, East College
ANNE ELY BERTOLET,	<i>Oley.</i>	Women's College
HOBART GEISSINGER BIEHN,	<i>Quakertown.</i>	No. 18, East College
JAMES NIEMAN BIERLY,	<i>Milton.</i>	No. 10, West College
DAWSON FLOYD BLOOM,	<i>Sunbury.</i>	No. 83, West College
EDNA BEATRICE BLOOM,	<i>Sunbury.</i>	Sunbury
WILLIAM JENNINGS BRYAN BLOOM,	<i>Sunbury.</i>	No. 91, West College
HELEN ELIZABETH BODINE,	<i>Jenkintown.</i>	Women's College
LAMBERT TEUFEL BOTTS,	<i>Milton.</i>	No. 14, East College
ELIZABETH BOWLER,	<i>Atlantic City, N. J.</i>	Women's College
MARGARET IRENE BROWN,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
MERRILL WILSON BROWN,	<i>Lewisburg.</i>	Lewisburg
ARCHIBALD DAVID BROWNING,	<i>Scranton.</i>	No. 73, East College
WARREN WOODWARD BRYSON,	<i>Media.</i>	No. 73, West College
JOHN WESLEY CAMPBELL,	<i>Mauch Chunk.</i>	No. 19, East Wing
EARL KEAYS CARPENTER,	<i>Jamestown, N. Y.</i>	No. 13, East Wing
FORREST NATHANIEL CATHERMAN,	<i>Mifflinburg.</i>	Mifflinburg
NELSON ELLSWORTH CHANCE,	<i>Dividing Creek, N. J.</i>	No. 15, West Wing
LUCELIA BERYL CHILDS,	<i>Groton, N. Y.</i>	Lewisburg
KENNETH GROSS CLARK,	<i>Scranton.</i>	No. 83, East College
RUTH PRETTYMAN CLARK,	<i>Collingswood, N. J.</i>	Women's College
VINCENT PAUL CONNELLY,	<i>Branchdale.</i>	No. 30, West College
ELTHERA GLENN CORSON,	<i>Bridgeton, N. J.</i>	Women's College
JAMES CAMPBELL CRAIG,	<i>Philadelphia.</i>	No. 31, West College
CHLOE PEARL CROSLY,	<i>Hughesville.</i>	Lewisburg
DAVID RAYMOND CROSSGROVE,	<i>Lewisburg.</i>	Lewisburg
ETHYLE DOUGLAS CULBERT,	<i>Elizabeth.</i>	Women's College
LOREN DAVIDSON CUNNINGHAM,	<i>Portsmouth, Ohio.</i>	No. 27, East Wing
WILLIAM POWELL DAY,	<i>Brookside.</i>	No. 57, East College
CARROLL HEINEY DEITRICK,	<i>Watsontown.</i>	No. 50, West College
HERBERT SETLEY DELONG,	<i>Watsontown.</i>	No. 17, West College

NAME.	RESIDENCE.	ROOM.
ERROL HUNT DERBY,	<i>Scranton.</i>	No. 57, West College
MERRILL BROWN DEWIRE,	<i>Lewisburg.</i>	Lewisburg
STEPHEN FREDERICK DIMLICH,	<i>Scranton.</i>	No. 69, East College
HOLMES TOMLIN DOUGLASS,	<i>Dias Creek, N. J.</i>	No. 21, East Wing
ELIZABETH RUTH DOWNS,	<i>Williamsport.</i>	Women's College
ELEANOR WINIFRED DYKINS,	<i>Nanticoke.</i>	Women's College
BEATRICE MARGARET ELWELL,	<i>Bridgeton, N. J.</i>	Women's College
MARK REUBEN EVERETT,	<i>Slatington.</i>	No. 74, East College
MILDRED CLEMENTINE FARLEY,	<i>New Columbia.</i>	New Columbia
ROBERT BOYER FAUST,	<i>Sunbury.</i>	No. 91, West College
BEATRICE MAY FETTERMAN,	<i>Hazleton.</i>	Women's College
HAZEL VICTORIA FLORIN,	<i>Johnsonburg.</i>	Women's College
LESTER PERHAM FOWLE,	<i>Danville.</i>	No. 1, East College
HELEN ADELAIDE FOWLER,	<i>Middleburg.</i>	Women's College
JULIUS ORVILLE FRAKER,	<i>Orbisonia.</i>	No. 33, West College
CHARLES RAYMOND FREEBLE,	<i>Latrobe.</i>	No. 14, West Wing
FLORENCE MINERVA GABLE,	<i>Lewisburg.</i>	Lewisburg
BURDETTE CURTIS GARDNER,	<i>Carbondale.</i>	No. 18, West College
EDITH AMANDA GARDNER,	<i>Carbondale.</i>	Women's College
GEORGE EWAN GASKILL,	<i>Philadelphia.</i>	No. 27, East Wing

NAME.	RESIDENCE.	ROOM.
DAVID ANDREW GEARHART,	<i>Wighton.</i>	No. 37, West College
ALBERT GABRIEL GIBBS,	<i>Nanticoke.</i>	No. 107, East College
MARY KATHARINE GLOVER,	<i>Vicksburg.</i>	Women's College
MARIAN KATHERINE GOHO,	<i>Lewisburg.</i>	Lewisburg
ALICE GERTRUDE HACKETT,	<i>Johnstown.</i>	Women's College
WALTER ALLAN HARM,	<i>Snow Shoe.</i>	No. 40, West College
JAMES NELSON HAVILAND,	<i>Jersey Shore.</i>	No. 13, East Wing
HENRY URIAH HECKART,	<i>Lewisburg.</i>	Lewisburg, R. D.
THOMAS JACOB S. HEIM,	<i>Williamsport.</i>	No. 79, West College
PAUL WILSON HEIM,	<i>Lewisburg.</i>	Lewisburg
JOHN KEARSLEY HENDERSON,	<i>Phillipsburg.</i>	No. 32, East College
ALBERT FRED HERBINE,	<i>Berwick.</i>	No. 41, East College
FRANCES LOUISE HERRITT,	<i>Jersey Shore.</i>	Women's College
ROY NEVIN HILL,	<i>Leechburg.</i>	No. 17, East Wing
AGNES HOFFMAN,	<i>Chadd's Ford. .</i>	Women's College
IRVIN VALENTINE HOLMES,	<i>Mawr Glen.</i>	No. 23, East Wing
CAMERON BURNSIDES HOLTER,	<i>Howard.</i>	No. 94, East College
MORRIS DANIEL HOOVEN,	<i>Turtle Creek.</i>	No. 38, East College
LOUISA HOWELLS,	<i>Carbondale.</i>	Women's College
ROBERT LEON HULSIZER,	<i>Milton.</i>	Milton
EVAN WILLIAM INGRAM,	<i>Nanticoke.</i>	No. 16, West Wing

NAME.	RESIDENCE.	ROOM.
FRANK WELTON INGRAM,	<i>Lewisburg.</i>	Lewisburg
KATHERINE ELLEN JOHNSON,	<i>Williamsport.</i>	Women's College
LLEWELLYN JONES,	<i>Plymouth.</i>	No. 25, East Wing
MABEL ERMA JONES,	<i>Throop.</i>	Women's College
HARVEY EARL KAUFFMAN,	<i>Gouglersville.</i>	No. 78, West College
JOHN RISSLER KAUFFMAN,	<i>Sunbury.</i>	No. 80, West College
RUTH ALIDA KELLOGG,	<i>Dalton.</i>	Women's College
BLANCHE MARGARET KENNELLEY,	<i>Milton.</i>	Milton
EDWIN MARTIN KEOUGH,	<i>Glassboro, N. J.</i>	No. 29, West College
JEAN ELIZABETH KERR,	<i>West View.</i>	Women's College
KATHERYN REBECCA KEYLOR,	<i>Cochranville.</i>	Women's College
LILLIAN IRENE KILLIAN,	<i>Susquehanna.</i>	Women's College
HENRY KITLOWSKI,	<i>Nanticoke.</i>	No. 88, West College
HENRY DANIEL KLOHS,	<i>Shillington.</i>	No. 112, East College
JOSEPH MICHAEL KWIATEK,	<i>Olyphant.</i>	No. 27, East College
ROBERT SIMINGTON KYLE,	<i>Milton.</i>	Milton
HUSTON LINCOLN LACLAIR,	<i>Uniontown.</i>	No. 22, West College
ALBERT SIGMUND LAEHDER,	<i>Manasquan, N. J.</i>	No. 11, West Wing
EDITH MARIE LARSON,	<i>New Haven, Conn.</i>	Women's College
ALLEN EUGENE LEES,	<i>Juniata.</i>	No. 25, West College
GEORGE WALTER LEES, JR.,	<i>Camden, N. J.</i>	No. 70, East College

NAME.	RESIDENCE.	ROOM.
FREDERICK HAROLD LEWIS,	<i>Mt. Olive.</i>	No. 36, West College
WILLARD LEGRANDE LEWIS,	<i>Thompson.</i>	No. 20, West College
CECILIA ABIHAIL LINCH,	<i>Elmer, N. J.</i>	Women's College
VORIS ALBERT LINKER,	<i>Williamsport.</i>	No. 67, West College
WILLIAM CURTIS LITTERER,	<i>Danville.</i>	No. 18, West Wing
LESLIE CLAIR LLOYD,	<i>Brisbin.</i>	No. 82, East College
PEARL AILEEN LOTT,	<i>West Pittston.</i>	Women's College
JOHN RUSSELL LOWMAN,	<i>Johnstown.</i>	No. 19, East College
GEORGE LOXLEY LOWRY,	<i>Friendship, N. Y.</i>	No. 50, East College
HENRY CLAY LUCAS,	<i>Winfield.</i>	Winfield
AUSTIN EVERETT LUTZ,	<i>Fritztown.</i>	No. 78, West College
HELEN RIDGWAY MARTIN,	<i>Franklin.</i>	Women's College
JOHN ARLINGTON MASON,	<i>Williamsport.</i>	No. 56, West College
WINFIELD SCOTT MASTERS,	<i>Taylor.</i>	No. 68, East College
ANDREW RUSSELL MATHIESON,	<i>Munhall.</i>	No. 34½, East Wing
MARY HELEN MATTHEWS,	<i>Johnstown.</i>	Women's College
WILLIAM LLOYD MESSINGER,	<i>Watsontown.</i>	Watsontown
CARL ADAM METZ,	<i>Scranton.</i>	No. 89, West College
CHARLES WARREN MILLER,	<i>Fleetwood.</i>	No. 84, East College
CORBETT GEORGE MILLER,	<i>Lewisburg.</i>	Lewisburg
EMERSON RALPH MILLER,	<i>Ephrata,</i>	No. 26, West College

NAME.	RESIDENCE.	ROOM.
HAROLD EDWARD MILLER,	<i>Lewisburg.</i>	Lewisburg
GRACE DEVERE MILLWARD,	<i>Lewisburg.</i>	Lewisburg
ETHEL AUGUSTA MITCHELL,	<i>Williamsport.</i>	Women's College
EDITH VANDYNE MOORE,	<i>Bradford.</i>	Women's College
HENRY LEWIS DAVIS MOORE,	<i>Bridgeton, N. J.</i>	No. 52, East College
JAMES FRED MOORE,	<i>Milton.</i>	No. 14, East College
RUTH MOORE,	<i>Port Republic, N. J.</i>	Women's College
RALPH SAMUEL MORGAN,	<i>Edwardsville.</i>	No. 9, West College
WILLIAM HENRY MORRISON, JR.,	<i>Philadelphia.</i>	No. 32, West College
HELEN LOUISA MOYLE,	<i>Plymouth.</i>	Women's College
FRANCES ADA MCFARLAND,	<i>Watsonstown.</i>	Watsonstown
JOSEPH EMERSON MCILWAIN,	<i>Leolyn.</i>	No. 22, East Wing
HARRY LEROY NANCARROW,	<i>Jersey Shore.</i>	No. 60, West College
HELEN NUTT,	<i>Dresden, N. Y.</i>	Women's College
JOHN ALFRED O'NEAL,	<i>Dunmore.</i>	No. 24, East Wing
GLENN EDWIN OTT,	<i>Orbisonia.</i>	No. 35, West College
THOMAS ERVIN OWENS,	<i>Nanticoke.</i>	No. 55, West College
JAMES ALFRED PANGBURN,	<i>Elizabeth.</i>	No. 44, West College
ELIZABETH NARCISSA PATTERSON,	<i>Kirkwood.</i>	Women's College
FELIX PIEKARSKI,	<i>Nanticoke.</i>	No. 12, West College
CLIFFORD CLARK PINDER,	<i>Johnstown.</i>	No. 10, East College

NAME.	RESIDENCE.	ROOM.
CLARENCE HENRY PONTIUS,	<i>Sunbury.</i>	No. 84, West College
EVELYN GWENDOLYN POWELL,	<i>Edwardsville.</i>	Women's College
JOY TILLMAN PROSS,	<i>Lewisburg.</i>	Lewisburg
KATHERINE FLORENCE PUDDICOMBE,	<i>New Haven, Conn.</i>	Women's College
FRANCIS FESS REAMER,	<i>Pittsburgh.</i>	No. 46, West College
HENRY CLAY REED,	<i>Lock Haven.</i>	No. 29, West Wing
HELEN REED,	<i>New Brunswick, N. J.</i>	Women's College
ELTON PHILLIPS RICHARDS,	<i>Wilkes-Barre.</i>	No. 22, East Wing
GEORGE EMERSON RICKART,	<i>South Williamsport.</i>	No. 52, West College
WILLIAM JENNINGS RINEBOLD,	<i>Athens.</i>	No. 41, West College
WILLIAM JOHN ROLF,	<i>Scranton.</i>	No. 53, West College
WALTER DRY ROOS,	<i>Reading.</i>	No. 100, East College
REUBEN HYMAN ROSENHEIM,	<i>Kingston.</i>	No. 27, West College
MABEL ELIZABETH RUCKMAN,	<i>Turbotville.</i>	Women's College
THADDEUS ANTHONY SALACZYNSKI,	<i>Nanticoke.</i>	No. 20, West Wing
MARY PAULINE SCHENCK,	<i>Morristown, N. J.</i>	Women's College
JOHN FREDERICK SCHNEIDER, JR.,	<i>Vineland, N. J.</i>	No. 7, East College
ANTHONY ALFONSE SCHWENKLER,	<i>Mt. Carmel.</i>	No. 25, East Wing
LENA REBECCA SCOUTON,	<i>Wilkes-Barre.</i>	Women's College
FURMAN WATSON SHAW,	<i>Haddonfield, N. J.</i>	No. 18, West Wing
ABRAHAM LINCOLN SHERK,	<i>Camden, N. J.</i>	No. 67, East College

NAME.	RESIDENCE.	ROOM.
JOSEPH REGINALD SILBERSTEIN,	<i>Pittsburgh.</i>	No. 65, West College
MARGARET SNOVER SIPLEY,	<i>Lewisburg.</i>	Lewisburg
KATHRYN SLIFER,	<i>Milton.</i>	Milton
WARREN HENRY SLOCUM,	<i>Reading.</i>	No. 78, East College
BROMLEY REYNOLDS SMITH,	<i>Lewisburg.</i>	Lewisburg
GEORGE ADDISON SMITH,	<i>Flanders, N. J.</i>	No. 54, East College
MARGARET THOMAS SMITH,	<i>Lansford.</i>	Women's College
ROBERT BRUCE SMITH,	<i>Hughesville.</i>	No. 80, West College
ROY DIETRICH SNYDER,	<i>Hazleton.</i>	No. 115, East College
JAMES THOMAS SOLLERS, JR.,	<i>Pikesville, Md.</i>	No. 102, East College
WILLIAM EVERETT CLARK SPEARE,	<i>Lewisburg.</i>	Lewisburg
WILLIAM FRANKLIN STECK,	<i>Muncy.</i>	Lewisburg
ISADOR ALBERT STEIN,	<i>Dunmore.</i>	No. 53, West College
CHAUNCEY LANGDON STICKLER,	<i>Hazleton.</i>	No. 111, East College
PAUL STOLZ,	<i>Reading.</i>	No. 88, East College
MANUEL DEJESUS SUROS,	<i>Lewisburg.</i>	Lewisburg
BURTON HODGE SWEITZER,	<i>Plymouth.</i>	No. 24, East College
WILLIAM MCKINLEY TONKAY,	<i>Greensburg.</i>	No. 74, West College
MARGARET HELEN TRUMP,	<i>Derry.</i>	Lewisburg
JOHN BEEBER VANDERBILT,	<i>Williamsport.</i>	No. 97, East College
DOROTHY VILLINGER,	<i>Williamsport.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
ROBERT NORMAN WADDELL,	<i>Pittsburgh.</i>	No. 65, West College
HARRY JOHN WAGNER,	<i>Philadelphia.</i>	No. 101, East College
KATHRYN LUETTA WAGNER,	<i>Lewisburg.</i>	Lewisburg
HELEN MCCORMICK WALTON,	<i>Williamsport.</i>	Women's College
HARRY REDCAY WARFEL,	<i>Reading.</i>	No. 99, East College
PAUL AUGUSTUS WEAVER,	<i>Reading.</i>	No. 113, East College
FRANKLIN AUGUST WEIGAND,	<i>Philadelphia.</i>	No. 24, East Wing
EMMANUEL ADAM WEISHAAR,	<i>Williamsport.</i>	No. 40, East College
GERTRUDE ESTELLA WERTS,	<i>Pittston.</i>	Women's College
CARRIE AMANDA WETZEL,	<i>Beavertown.</i>	Women's College
ADELIA LOVINIA WILKES,	<i>Erie.</i>	Lewisburg
THEODORE CORTLANDT WILLIAMS,	<i>Vineland, N. J.</i>	No. 5, East College
ALLEN FRYMIRE WILLSON,	<i>Williamsport.</i>	No. 9, East Wing
WALTER EMANUEL WOMER,	<i>Munson.</i>	No. 40, West College
CORBIN WAYLAND WYANT,	<i>Kittanning.</i>	No. 27, East College

Freshmen, 199.

NON-MATRICULATES.

NAME.	RESIDENCE.	ROOM.
STEPHEN BOOTHBAY ABBOTT,	<i>Waterville, Me.</i>	No. 13, East Wing
LESTER KELLEY ADE,	<i>Williamsport.</i>	Williamsport
*CLARENCE JOSEPH ALLEN,	<i>Dunmore.</i>	No. 29, East Wing
HAROLD RAYMOND BAIR,	<i>Vandergrift Heights.</i>	No. 37, East College
EARL WILSON BALBACH,	<i>Wilkes-Barre.</i>	No. 28, East Wing
JOSEPH ALVA BARNES,	<i>Williamstown.</i>	No. 28, East College
JESSIE NAOMI BOOGAR,	<i>Haddonfield, N. J.</i>	Women's College
WALTER ASHLEY BOYLES,	<i>Steelton.</i>	No. 47, East College
*DENZIL MERRITT CAMPBELL,	<i>Brookville.</i>	No. 59, East College
LENA CANTOR,	<i>Wilkes-Barre.</i>	Women's College
JOHN LATHEIGN DORRIS,	<i>Nanticoke.</i>	No. 19, East Hall
RALPH MILLER DYER,	<i>Elysburg.</i>	Market Street
*MARION ELLENBOGEN,	<i>Danville.</i>	Women's College
JOHN HESSE GURNEY,	<i>Paterson, N. J.</i>	No. 12, East College
ROLLIN DARWIN HAGER,	<i>Uniontown.</i>	No. 22, West College
JACK EMLIN HALL,	<i>Harrisburg.</i>	No. 82, West College
EDWIN WEIMER HULL,	<i>Montgomery.</i>	Montgomery
*FRANK YOUNG HUTCHINSON,	<i>Nicholasville, Ky.</i>	Milton
ARNOLD RUDOLPH KERTH,	<i>Philadelphia.</i>	No. 26, East College

NAME.	RESIDENCE.	ROOM.
*EDWARD CLINTON KOLB,	<i>Westmont, N. J.</i>	No. 22, West Wing
FREDERICK PAUL KUNTZ,	<i>Mauch Chunk.</i>	No. 28, East Wing
HERMAN SCHULTZBURG LUNK,	<i>Rochester.</i>	No. 85, East College
JOSEPH MICHAEL MAGGIO,	<i>Ralston.</i>	No. 34, West College
RANSOM CLEVELAND MOYER,	<i>Pennsdale.</i>	No. 11, East College
*DWIGHT WILLIAM RUDE,	<i>Waymart.</i>	No. 16, East College
VIOLA THERESA SCHAAD,	<i>Parsons.</i>	Women's College
RALPH WALDO SEARSON,	<i>Millmont.</i>	Millmont
LAVERNE HARRY SHEA,	<i>Williamsport.</i>	Williamsport
GROVER RUSSELL SHORT,	<i>Lebanon.</i>	No. 24, West Wing
*HARRY EDWIN SUTCH,	<i>Philadelphia.</i>	Second Street
LAURENCE A. VREDENBURG,	<i>Muncy.</i>	No. 104, East College
EDWIN THEODORE WEAVER,	<i>Lewisburg.</i>	Lewisburg

Non-Matriculates, 32.

SUMMARY.

Graduate Students	47
The Senior Class.....	121
The Junior Class.....	157
The Sophomore Class.....	159
The Freshman Class.....	199
Non-Matriculates	32

Total in the College of Liberal Arts..... 715

* Entered January 3, 1917.

THE SUB-FRESHMAN CLASS.

NAME.	RESIDENCE.	ROOM.
ARTHUR JENNINGS BRAUCHT,	<i>Dewart.</i>	Dewart
DONALD B. CLOWARD,	<i>Wilmington, Del.</i>	No. 23, East Hall
ROLAND NASON CRAGG,	<i>St. Peters.</i>	No. 24, East Wing
FRANKLIN WILLIAM DALY,	<i>Norwich, N. Y.</i>	No. 15, East Hall
HAROLD CLYDE MCCULLOUGH,	<i>Washington.</i>	No. 13, East Hall
MINNIE SARAH NEWMAN,	<i>Lewisburg.</i>	Lewisburg
JAMES HALBERT PROWANT,	<i>Lewisburg.</i>	Lewisburg
FRED WILSON ROMBACH,	<i>Watsonstown.</i>	Watsonstown
JOHN PRITCHARD WILLIAMS,	<i>Shenandoah.</i>	No. 21, East Hall
Sub-Freshmen, 9.		

THE SCHOOL OF MUSIC

FACULTY.

PAUL GEORGE STOLZ, A.M., DIRECTOR,
SCIENCE OF MUSIC, VOICE.

(Bucknell School of Music, Dr. Elysée Aviragnet, A.M.; Dr. Hugh Schussler, New York; Emrich and Soehnlín, Berlin, Germany.)

CHARLOTTE GUIONU ARMSTRONG,
VIOLIN, HISTORY OF MUSIC.

(Wyoming Seminary; New England Conservatory; Musin, New York City.)

MARY ELIZABETH SLEAR,
PIANO, HARMONY.

(Bucknell School of Music; Susquehanna University School of Music; Boyle, Peabody Institute, Baltimore, Md.)

PRISCILLA RICHARDSON HARDESTY,
PIANO, MUSICAL APPRECIATION.

(Bucknell School of Music; Institute of Musical Art, New York City; Ottmar Moll, St. Louis, Mo.; Gustav Becker, New York City.)

ETTA ALTHEA BROWN,
VOICE, SIGHT SINGING.

(Bucknell School of Music; Oscar Saenger, New York City; E. M. Young, New England Conservatory.)

MAME GERTRUDE KRAMER,
PIANO, VIRGIL CLAVIER.

(Bucknell School of Music; Virgil Piano Conservatory, New York City.)

MADAME GUISEPPINA DE SYLVA SCHOEN,
VOICE, STAGE DEPARTMENT.

(Macovaldi, Milano Conservatory; Broggio, Bologna Conservatory.)

ALVIN JACOB ADAMS,
PIPE ORGAN, HARMONY.

(Bucknell School of Music; Louis A. Brookes, Mus.D., Oxon., Wheeling, W. Va.; Clarence E. Day, New York City.)

NAMES OF STUDENTS

GRADUATE STUDENTS.

NAME.	COURSE.	RESIDENCE.
NELLE WOLFE AUMILLER,	<i>Voice, Theory.</i>	Lewisburg
CARRIE MARY JANE GRUGAN, B.A.,	<i>Voice.</i>	West Milton
RUTH VIOLET HAINES,	<i>Voice.</i>	Winfield
KATHRYN JENKINS,	<i>Voice.</i>	Milton
MARGUERITE STUCK,	<i>Piano.</i>	Milton
THEO EMMA STUCK,	<i>Voice.</i>	Mifflinburg

FOURTH YEAR STUDENTS.

SAMUEL ABRAMS,	<i>Piano, Theory.</i>	Milton
ELIZABETH ARNDT,	<i>Voice, Theory.</i>	Milton
DAVID NATHANIEL BOSWELL,	<i>Voice, Theory.</i>	Lewisburg
JESSIE LOUISE COOPER,	<i>Piano, Organ, Theory.</i>	Scranton
VELMA MILLER DAVIS,	<i>Piano, Organ, Voice, Theory.</i>	Kane
EUGENIA DUKE,	<i>Piano, Theory.</i>	Renovo
THOMAS AUSTIN ESHELMAN,	<i>Violin, Theory.</i>	Franklin
NALA WEBB FRIES,	<i>Piano, Theory.</i>	Lewisburg
ETHEL MARIE GRANT,	<i>Piano, Theory.</i>	Trevorton
CARRIE MARY JANE GRUGAN,	<i>Voice.</i>	West Milton

NAME.	COURSE.	RESIDENCE.
ELIZABETH LOUISE HAHN,	<i>Voice, Supervisor, Theory.</i>	Meshoppen
DON HARPAM,	<i>Violin, Theory.</i>	Milton
MILDRED ELIZABETH JORDAN,	<i>Supervisor, Piano, Voice, Theory.</i>	Athens
ARIAL KROMER,	<i>Supervisor, Voice, Theory.</i>	Milton
CONSTANTINO FORTUNATO NEGRO,	<i>Violin, Theory.</i>	Philadelphia
JESSIE IRENE POTTS,	<i>Supervisor, Piano, Voice, Theory.</i>	Greensburg
STEPHEN FRALEY PUFF,	<i>Voice, Theory.</i>	Philadelphia
MARGARET ISHMAN SIBLE,	<i>Supervisor, Piano, Voice, Theory.</i>	Mountindale
HAZEL TULE,	<i>Piano, Theory.</i>	Milton
FLORENCE EDITH TUTTLE,	<i>Supervisor, Piano, Voice, Theory.</i>	Port Alleghany
SARA EVANS THOMPSON,	<i>Voice, Theory.</i>	Sewell, N. J.
ANNA ELIZABETH UPDEGRAFF,	<i>Voice, Theory.</i>	Williamsport
FORREST GLENN WALTER,	<i>Theory.</i>	Potts Grove
GLADYS EDNA WILLS,	<i>Supervisor, Piano, Voice, Theory.</i>	Renovo
HELEN WINNER,	<i>Supervisor, Theory.</i>	Pittsburgh
MAUDE IRENE WITHERSON,	<i>Piano, Theory.</i>	Houtzdale

THIRD YEAR STUDENTS.

HELEN COOPER,	<i>Voice.</i>	Brockwayville
RUTH COOPER,	<i>Voice.</i>	Brockwayville
EDNA CRABB,	<i>Piano, Theory.</i>	Winfield
MARIAN IRENE DENTLER,	<i>Piano.</i>	Milton

NAME.	COURSE.	RESIDENCE.
ELEANOR WINIFRED DYKENS,	<i>Organ.</i>	Nanticoke
IRENE MARIE FRYE,	<i>Piano.</i>	Monessen
NELLY LOU GARDNER,	<i>Piano.</i>	Oxford, N. J.
HAZEL MARIE GAY,	<i>Organ.</i>	Homer, N. Y.
EMIL GEDRICH,	<i>Violin.</i>	Lewisburg
HAZEL LILLIAN HAGERMAN,	<i>Supervisor, Piano, Voice, Theory.</i>	Malaga, N. J.
HELEN WITHERSPOON HAMOR,	<i>Organ.</i>	Milton
RUTH HOFFA,	<i>Voice.</i>	Lewisburg
EDITH MCCLONG HORTON,	<i>Voice.</i>	Millville, N. J.
LENORE MILTON HULSIZER,	<i>Voice.</i>	Milton
BEULAH MAE HUMMEL,	<i>Voice, Theory.</i>	Lewisburg
ANNA LANGE,	<i>Piano.</i>	Milton
AILEEN MARIE LARSON,	<i>Voice.</i>	Kane
RAYMOND PLANK LEWIS,	<i>Violin.</i>	Bridgeton, N. J.
EMILY LEWIS MACKEY,	<i>Piano, Theory.</i>	Oxford
EARLE STEWARD PEDIGO,	<i>Voice.</i>	Corry
EMILY GROFF PIATT,	<i>Piano, Theory.</i>	Montgomery
ETHEL RUTH REMALY,	<i>Piano, Theory.</i>	Mazeppa
LOUISE ROBINSON,	<i>Violin.</i>	Milton
FAYE OLIVIA ROMBERGER,	<i>Piano, Voice, Violin, Theory.</i>	Elizabethville
MARY PAULINE SCHENCK,	<i>Voice.</i>	Morristown, N. J.

NAME.	COURSE.	RESIDENCE.
ONNOLEE MARIAN SEAGERS,	<i>Supervisor, Piano, Voice, Theory.</i>	Westfield
RUTH ELLEN SEMMEL,	<i>Supervisor, Piano, Organ, Theory.</i>	Northampton
FLORENCE PAULINE SHALTER,	<i>Voice.</i>	Reading
FRANCES SILBERSTEIN,	<i>Voice.</i>	Philadelphia
MARY DOROTHEA TOOLEY,	<i>Voice.</i>	Danville
MARIE VOLKMAR,	<i>Voice.</i>	Williamsport

SECOND YEAR STUDENTS.

FRANCES ALBRIGHT,	<i>Voice.</i>	Milton
ANNIE ELY BERTOLET,	<i>Piano.</i>	Oley
PEARL MARTHEDEUS BEURY,	<i>Piano, Theory.</i>	Sunbury
CHRISTINE BRIEHOFF,	<i>Voice.</i>	Milton
ELIZABETH BIRD CHAMPION,	<i>Piano.</i>	Montoursville
ISAAC FRANKLIN DREIBELBIS,	<i>Piano.</i>	Lewisburg
RAYMOND FASOLD,	<i>Voice.</i>	Sunbury
MERRILL FRANKLIN FEAIRHELLER,	<i>Piano.</i>	Spring City
MARY BEAVER GARBER,	<i>Voice.</i>	Montandon
MARY ELLEN HARRIS,	<i>Voice.</i>	Lewisburg
HENRIETTA HEINSLING,	<i>Voice.</i>	Altoona
EARL BUCHER HERTZLER,	<i>Voice.</i>	Richland
KATHERINE BISHOP HOFF,	<i>Voice.</i>	Reading
NERISSA DAGMAR JAMES,	<i>Piano.</i>	New York City

NAME.	COURSE.	RESIDENCE.
LEAH ELIZABETH LINDIG,	<i>Piano, Theory.</i>	Lewisburg
HAROLD CLYDE McCULLOUGH,	<i>Voice.</i>	Washington
ROSE MAHER,	<i>Supervisor, Piano, Violin, Theory.</i>	Port Alleghany
JAMES FRED MOORE,	<i>Voice.</i>	Milton
ESTHER MARIA NOLL,	<i>Piano.</i>	Lewisburg
IDA MAE NOLL,	<i>Piano, Theory.</i>	Sunbury
FRANCES ZELLA PARDOE,	<i>Piano.</i>	Lewisburg
KATHERINE PAULINE REED,	<i>Voice, Theory.</i>	Sunbury
MARY ELIZABETH REESE,	<i>Voice.</i>	Lansford
HELEN SHEPARD RUGGLES,	<i>Supervisor, Piano, Voice, Theory.</i>	Athens
SAMUEL SASSO,	<i>Voice.</i>	Milton
VIOLA T. SCHAAD,	<i>Voice.</i>	Parsons
MARGARET SNOVER SIPLEY,	<i>Piano.</i>	Lewisburg
ERMA MAE SMITH,	<i>Piano.</i>	Lewisburg
ELLEN MAE SMITH,	<i>Piano, Theory.</i>	Lewisburg
SARA STROH,	<i>Piano.</i>	Lewisburg
GEORGE ALBERT TURNER,	<i>Organ, Piano, Voice, Theory.</i>	Carbondale
BEULAH REBECCA WIRT,	<i>Supervisor, Piano, Voice, Theory.</i>	Sunbury

FIRST YEAR STUDENTS.

FRANCES AUMILLER,	<i>Piano.</i>	Lewisburg
MARGARET AUMILLER,	<i>Piano.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
GEORGE EDWIN BAKER,	<i>Violin.</i>	Lewisburg
LEO BALISTRERO,	<i>Voice.</i>	Milton
ELEANOR BALLENTINE,	<i>Piano.</i>	Lewisburg
MARY MAGDELENE BUBB,	<i>Piano.</i>	Dalmatia
MARGARET JANE BUCK,	<i>Voice.</i>	Weldon
CHARLES SAMUEL BURRELL,	<i>Piano, Organ, Voice.</i>	Milheim
LENA CANTOR,	<i>Piano, Voice.</i>	Wilkes-Barre
WILLIAM COLESTOCK,	<i>Piano.</i>	Lewisburg
ELTHERA GLENN CORSON,	<i>Voice.</i>	Bridgeton, N. J.
VIOLET ZOE DAKIN,	<i>Voice.</i>	Milton
ESTHER MAGDELENE EYER,	<i>Voice.</i>	Shamokin
THELMA FASOLD,	<i>Piano.</i>	Sunbury
THERON FASOLD,	<i>Piano.</i>	Sunbury
HAZEL VICTORIA FLORIN,	<i>Voice.</i>	Johnsonburg
RUTH EVELYN FARQUHAR,	<i>Piano.</i>	West Brownsville
MATILDE GAMBOA,	<i>Violin.</i>	Merida, Yucatan, Mexico
MIREYA GAMBOA,	<i>Piano.</i>	Merida, Yucatan, Mexico
IRENE ELSIE GOSSWEILER,	<i>Voice.</i>	Allentown
KATHERINE GREENE,	<i>Piano.</i>	Sunbury
WILLIAM GRETZINGER,	<i>Piano.</i>	Lewisburg
IRENE HARTNETT,	<i>Violin.</i>	Milton

NAME.	COURSE.	RESIDENCE.
BLANCHE MARGARET KENNELLEY,	<i>Voice.</i>	Milton
HENRY DANIEL KLOHS,	<i>Piano.</i>	Shillington
MAE BEATRICE KLOSE,	<i>Voice, Theory.</i>	Milton
ERNEST KORTEN,	<i>Violoncello.</i>	Sunbury
DAVID JAMES MARTIN,	<i>Voice.</i>	Seranton
ELEANOR MCCORMICK,	<i>Piano.</i>	Watsontown
FLORINE MICHAEL,	<i>Voice.</i>	Laceyville
RACHAEL MILLER,	<i>Violin.</i>	Milton
KATHERINE FLORENCE PUDDICOMBE,	<i>Piano.</i>	New Haven, Conn.
FRANCIS REDDING,	<i>Piano.</i>	Lewisburg
LAYAH REECE,	<i>Violin.</i>	Milton
MARGARETTA REED,	<i>Voice.</i>	Harrisburg
MAE REITZ,	<i>Piano.</i>	Winfield
EDITH RICALDE,	<i>Piano.</i>	Merida, Yucatan, Mexico
ELEANOR ROBBINS,	<i>Violin, Voice.</i>	Watsontown
LURA REBECCA SCOUTEN,	<i>Piano.</i>	Wilkes-Barre
LAKE TENNYSON SHEARY,	<i>Piano.</i>	Lewisburg
KATHRYN SLIFER,	<i>Voice.</i>	Milton
HAZEL MAE SMITH,	<i>Voice.</i>	Milton
SARA STRAIT,	<i>Piano.</i>	Lewisburg
HELEN ELIZABETH SWARTZ,	<i>Voice.</i>	Milton

NAME.	COURSE.	RESIDENCE.
OLIVE MARGARET THOMPSON,	<i>Voice.</i>	Mifflinsburg
GEORGE DEWEY VANADA,	<i>Violin, Theory.</i>	Lewisburg
JOSEPHINE SARAH WALTER,	<i>Piano.</i>	Montandon
CARRIE AMANDA WETZEL,	<i>Voice.</i>	Beavertown
KARL WOLFE,	<i>Piano.</i>	Lewisburg

SUMMARY.

Piano	108
Pipe Organ	15
Violin	25
Voice	120
Violoncello	1
Supervisor's Course	14
History of Music.....	21
Beginners' Harmony	24
Advanced Harmony	20
Virgil Clavier	20
Musical Appreciation	22
Total Number of Lessons.....	390
Pupils	144

GRADUATES, CLASS OF 1916.

NAME.	RESIDENCE.
ALVIN JACOB ADAMS,	Bellaire, Ohio
NELLE WOLFE AUMILLER,	Lewisburg
GEORGE THOMAS BENDER,	Lewisburg
KATHERINE BERGSTRESSER,	Montgomery
MABEL DUNKELBERGER,	Sunbury
MARGARET WASHINGTON EVANS, B.A.,	Plymouth
CATHRYN JENKINS,	Milton
CHARLOTTE PROBASCO LANING,	Bridgeton, N. J.
CECIL MCCOLLUM,	Montrose
JENNIE FOLLMER McLAUGHLIN,	Lewisburg
CAMILLA BUNKER REED,	Hollidaysburg
MARY FLORENCE ROLLINS, B.A.,	Altoona

NAME.	RESIDENCE.
LILA MAE SHIMP,	Ephrata
THEO EMMA STUCK,	Mifflinburg
CHARLOTTE WELLIVER,	Bloomsburg
RUTH WILLIAMS, SC.B.,	Parsons
MARIE YEISLEY,	Mifflinburg

A BRIEF HISTORY.

Music was first taught at Bucknell University in 1853 by Melville Malcolm under the supervision of the Seminary. Various teachers had charge until 1858, when Monsieur Theodore P. Held, a French artist, took charge with one assistant, and in 1864 he was given a second assistant. In 1865 Monsieur Held's position became vacant, but he again resumed his work in 1866. In 1867 Alexander M. Loos was made Professor of Music. In 1869 Hermann F. Eberhardt took up the duties of Professor of Music and by 1870 there were sixty students enrolled in the Music Department. In 1871 a vocal teacher was added to the music faculty. In 1888 Professor Elysée Aviragnet, M.A., took charge of the Music Department. In 1892 Professor Aviragnet received the degree of Doctor of Music, after which the Music Department was known as the Bucknell University School of Music, one of the distinct schools of the University, which are one corporation and have one President, who has general charge. Since 1903 Paul Stolz became actively associated with Dr. Aviragnet and his work in the School of Music, became his assistant, later Assistant Director, and at Dr. Aviragnet's death in 1908, his successor as Director of the School of Music. In 1916 the music faculty consisted of eight teachers, three in piano, three in voice, one in violin, and one in pipe organ with an attendance of one hundred and forty-four pupils.

COURSES OF STUDY

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

COURSE IN PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *Études* by Biehl, Lemoine, LeCouppéy, Bertina and Czerny; introductory technical work; Sonatines, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46, and 47; Loeschorn, Op. 66; Czerny, Op. 299; Bernes, Op. 61; Easier Mozart, Haydn, Beethoven, *Sonatas*; Little Preludes by Bach; Bach *Inventions*, *Scales*, *Arpeggios* and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 *Studies*; Clementi *Gradus ad Parnassum*; Moscheles, Op. 70; Bach *Suites*, Handel *Suites*, Scarlatti pieces, Beethoven *Sonatas*; introductory Chopin work; compositions by Grieg, Godard, MacDowell, Moszkowski, and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerta; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Études; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms, and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements, and purposes of each student.

COURSE IN PIPE ORGAN.

The study of pipe organ is generally pursued by music students having at least Junior standing in piano. The Course is designed to provide a thorough education as choirmaster and organist, and provides for a training in all that pertains to intelligent performance of church music, voluntaries and the art of accompaniment; also a systematic drill in technics, registration, and improvisation.

A new pipe organ for practice was installed during the summer of 1916.

FIRST YEAR.

Stainer's Organ Method. Schneider's Organ Studies. Easy Hymn Tunes. Registration. Sight Reading. Easy pieces by Batiste, Flagler, Lemaigre, etc.

SECOND YEAR.

Dudley Buck's Short Preludes and Fugues, and Pedal Phrasing. Bach Chorales. Difficult hymn tunes. Organ solos of various styles by Rheinberg, DuBois, etc.

THIRD YEAR.

Sonatas by Merkel, Bach, and Mendelssohn. Preludes, Toccatas, Fugues. Quartet and chorus accompaniment. Selected solos by Guil-mant, Malling, etc.

FOURTH YEAR.

Each Senior Must Register for Full Course.

Sonatas by Guil-mant, Rebuke. Symphonies by Widor. Bach's Advanced Works. Chanting and solo accompaniment. Improvisation. Selected solos for concert use, by Franck, Widor, Lemare, Hollins, etc. Voice (three terms).

It is very essential that an organist and choirmaster should understand the various voices he is to train, and for this reason we consider the voice requirement indispensable in the Organ Course.

A minor Course in Organ Construction will be required of graduate students in addition to the following theoretical courses:

Solfeggio and dictation (three terms).

Harmony (six terms).

Harmonic Analysis (two terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

In order to give organ students a good presence in public appearance, all organ students will be required to appear in public and semi-public recitals once each month.

COURSE IN VIOLIN.

In the Violin Course, special attention is given to correct bowing, ear training and interpretation, a thorough acquisition, technically and the study of a repertoire; with a few additions or changes to suit the individual requirements of the student, the general outline of the Course is as follows:

FIRST YEAR.

Methods of Schubert, Wohlfart, Spohr, etc. Scales and bowing exercises to promote beauty of intonation. Easy pieces.

SECOND YEAR.

Schools by De Beriot, Mazas, and Kayser. First ten studies of Kreutzer.

THIRD YEAR.

Concertos by Viotti. Sonatas by Gade, Grieg, and others. Études by Kreutzer, Fiorillo, and Casorti.

FOURTH YEAR.

Rode Caprices and Concertos. Mendelssohn and Mozart Concertos. Solos by the best composers for the violin are used throughout the Course to develop style and phrasing.

Opportunity is given for ensemble playing to those sufficiently advanced. One year of pianoforte study is required.

Theoretical courses required for graduation:

Solfeggio and Dictation (three terms).

Harmony and Analysis (six terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

COURSE IN VIOLONCELLO.

FIRST YEAR.

Technical exercises. Major scales in two octaves. "Method Practique," by S. Lee. Studies by Dotzauer. Easy pieces.

SECOND YEAR.

Technical exercises by Cossmann. Scales in three and four octaves. Studies by Lee and Franchomme. Concertinos and pieces by Romberg.

THIRD YEAR.

Technical exercises by Fitzhagen. Advanced studies by Grutzmacher. Concertos.

FOURTH YEAR.

Technical exercises by Klengel and Becker. Advanced studies. Sonatas by Bach.

Theoretical courses. See Violin Course.

COURSE IN CONTRABASS.

FIRST YEAR.

Warnecke's Method of Playing. Scales and finger exercises. Études.

SECOND YEAR.

Vorzuegliche Uebungen, Hause's. Études. Overtures. Symphonies.

THIRD YEAR.

Warnecke's Method. Advanced Études. Beethoven Symphonies.

FOURTH YEAR.

Warnecke's Method. Part 2. Wagner Operas. Solos by Sturm and Laska.

Theoretical courses. See Violin Course.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies, by Campagnoli.

VOICE CULTURE.

Careful instruction is given in the use of the voice and the correct manner in producing purity of tone—the equalization of tone throughout the whole compass of the voice, and gain for it flexibility, fullness and durability.

TONE WORK. Physiology, breath control, voice placing.

ENUNCIATION. Attack, release, vibration, legato. (Vowels, diphthongs, and consonants.)

SIGHT SINGING. Staff notation, rhythm, ear training, harmony.

REPERTOIRE. Interpretation and classification.

SONG, ORATORIO, AND OPERA COACHING.

Pupils desiring to acquire the true rendition in oratorio solo singing, as exemplified in the interpretation of the great singers and conductors, can secure the necessary knowledge and thus equip themselves for public performances.

Ensemble Singing, Duets, Trios, Quartets, and Choruses from Operas and Oratorios.

Studies from the works of old masters such as Palestrina, Orlando di Lasso, Gabrieli, Leo Hassler, etc.

Production of various opera scenes.

FIRST YEAR.

Breath Control. First Vocalises of Concone. Diction. Slow Easy Songs. Solfeggios.

SECOND YEAR.

Vocalises by Concone, Marchesi, Lamperti, and others. Diction. More advanced English songs. Simple Recitative. Simple Arias. Solfeggios. Piano (one lesson weekly). Chorus. Advanced Vocalises, Song Interpretations. Velocity.

THIRD YEAR.

Advanced Vocalises. Song Interpretation. Velocity. Coloratura singing begun. Difficult Recitatives. Elaborate Arias. Solfeggios Advanced. Chorus.

FOURTH YEAR.

Complete Oratorio Rôles. Complete Opera Rôles. Preparation of Concert Programs. Chorus.

Theoretical courses required for graduation. See Theory for Piano Course.

TEACHERS' COURSE IN PUBLIC SCHOOL MUSIC.

This Course provides in a systematic manner the best teaching methods, together with a thorough drill in sight reading, ear training and harmony; also gives actual practice in conducting the

classes. In most of the public schools the regular grade teachers instruct the pupils under the supervision of a supervisor trained for the work. The purpose of this department is training for such supervision; by instructing pupils how to teach others to teach sight singing.

Outline of music used in the two-year Supervisor's Course:

1 A and B. First Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co.; Progressive Music Series, Book I (Silver Burdette Co.); authors, Parker & McConally, Berge & Miessner. Melodies, New Educational Course, Ginn & Co.

2 A and B. First Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co.; Progressive Music Series, Book I (Silver Burdette Co.). First Reader, New Educational Course, Ginn & Co.

3 A and B. Second Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co. First Reader, New Educational Course, Ginn & Co.

4 A and B. Third Year Music: Rote Songs (Dann), American Book Co.; Musical Dictation, Book I (Dann), American Book Co. Second Reader, New Educational Course, Ginn & Co.

5 A and B. Harmonic Second Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I (Dann), American Book Co. Third Reader, New Educational Course, Ginn & Co.

6 A and B. Harmonic Third Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I (Dann), American Book Co.; Third Reader, New Educational Course, Ginn & Co.

7 A and B. Harmonic Fourth Reader (American Book Co.), Frederic H. Ripley and Thomas Tapper; Musical Dictation, Book I (Dann), American Book Co. Fourth Reader, New Educational Course, Ginn & Co.

8 A and B. Junior Laurel Songs, Student's Edition, M. Teresa Armitage (C. C. Birchard & Co., Boston, Mass.). Fourth Reader, New Educational Course, Ginn & Co.

High School. Corona Song Book (Huff) Ginn & Co.; Musical Dictation; Four Part Songs by Old Masters, Opera, Oratorio.

Text Books: Psychology of Singing, Taylor; Education Through Music, Farnsworth.

The Seniors in Public School Supervisor's Course teach daily classes, also conduct normal music classes in order that public school teachers can properly carry out the plans of the supervisors.

HARMONY.

The fundamental principles of the theory of music are embodied in the study of harmony which treats of the different chords in their natural relations and combinations. The subdivisions of the subject are as follows: Intervals, or the measurement of the difference in pitch between one tone and another; triads, seventh, and ninth chords with their inversions and resolutions; chromatically altered chords; augmented chords; cadences; suspensions; passing and changing notes; organ point; modulation.

The work consists of written exercises on basses (both figured and unfigured) and the harmonization of given melodies in three and four voices. These are corrected by the instructor out of the classroom and subsequently discussed with the students individually. Many exercises are also worked out on the blackboard by the students.

Modern Harmony, by Foote and Spalding, is used as the basis of the instruction. The Treatises of Prout, of Chadwick, and of others are used as reference books, and supplementary illustrations and explanations are given in the classroom. The course is as follows:

FALL TERM.

Musical Notation, formation of Scales, both Major and Minor, intervals, triads, and chord connection. Simple part writing from given basses and sopranos; the chords of the seventh, with exercises harmonizing in open and close positions.

WINTER TERM.

Modulation. Transposition of various models in all keys. Harmonizing melodies which modulate.

SPRING TERM.

Chromatically altered chords, suspension, retardation, appoggiatura, passing tone, embellishment, pedal point.

No text book required the first term.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

SPECIAL ADVANTAGES.

Artists' Recitals. The opportunity of hearing good music rendered by artists of superior ability, is very essential in connection with the classroom instruction. All students of the School of Music are urged to attend these concerts as they are admitted without expense beyond the fee of two dollars, which is charged with the fall term bill. Since the concerts are educational in character, the fee charge should be regarded part of the tuition.

TUITION.

Tuition is charged for instruction in music, per annum, as follows:

	<i>Full Course.</i>	<i>Half Course</i>	<i>Quarter Course.</i>
Vocal	\$82.00	\$47.00	\$27.00
Piano or Organ.....	82.00	47.00	27.00
Violin	82.00	47.00	27.00
Supervisor's Course in Public School Music	82.00	47.00	27.00
Harmony, in private lessons.....	82.00	47.00	27.00
Harmony in Class.....	27.00	....	....
Guitar and Mandolin, in Class.....	22.00	....	....
Use of Instruments for Practice Two Hours			
Daily, per term.....	4.00	....	....
Use of Pipe Organ for Practice One Hour			
Daily, per term.....	6.00	....	....

Special individual instruction in music, per lesson, \$2.00.

Full course implies two one-hour lessons per week, and theory.

Half course implies two half-hour lessons per week, and theory.

Quarter course implies one-half hour lesson per week, and theory.

No reduction is made except in case of protracted illness.

Instruction in the orchestra and in harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$260 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1916 this prize was divided between Katherine Bergstresser and Alvin Adams.

THE DIRECTOR'S PRIZE.

The Director of the School of Music offers an annual prize for excellence in the Science of Music.

VOICE PRIZE.

Paul Stolz offers an annual prize for excellence in voice.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

DEPARTMENT OF ELOCUTION

MISS EDITH SCHILLINGER.

MISS EUDORA REGINA HAMLER, A.B.

The aim of this department is the correct study of voice and body for the effective expression of thought and emotion. Special attention is given to voice culture, articulation, gesture and interpretative reading.

Semi-monthly recitals afford opportunity for platform work.

Particular attention is given to curing persons of stammering and other defects in speech.

The interpretation and the delivery of classics have a large place in the Course.

Special courses are offered to students who wish work along special lines of expression.

The Elocution Department offers a two-years' course leading to a certificate. All applicants for the regular course must have the equivalent of a high school education.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Institute, takes place in Bucknell Hall on the second Saturday evening in the month of May.

THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1916 the prize was awarded to Ethel Ruth Farley.

THE ART DEPARTMENT

MISS HELENA WAY.

The facilities for the study of Art have been greatly increased by the accommodations allotted to this department, in a special studio, which provides such adjustments for admission of light, and unencumbered wall surface as to render it adapted for the execution and display of art production.

The aim of the department is not only to supply the best facilities for the student of fine arts in general, but also by means of different courses of study to equip its students for any special line of artistic work which they may desire to follow.

The Art Department offers two Courses leading to graduation for persons who wish to take the Art Course for culture, or for teaching, or for future work.

Detailed information as to Elocution and Art can be obtained from special Bulletins which may be obtained from the Registrar.

DOMESTIC SCIENCE COURSE

FACULTY.

MISS ANNA ROBERTA CAREY, A.M.,
PSYCHOLOGY AND HYGIENE.

MISS ROSE ELIZABETH RAINEY (Drexel Institute),
COOKING.

MISS MARY CLAYTON (Columbia University),
COOKING AND SEWING.

NELSON FITHIAN DAVIS, SC.D.,
BIOLOGY AND BACTERIOLOGY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
CHEMISTRY.

WILLIAM GUNDY OWENS, A.M.,
CHEMISTRY OF FOODS.

LEO GUIDO CARL RIEMER, PH.D.,
FRENCH.

Students in Domestic Science are of College rank and their names are given in the catalog of College students.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology, and Hygiene, Biology, Bacteriology, and Psychology, the knowledge of cookery,

dietetics, home-sanitation, household economy, and home decoration, gained by the diligent student will meet the demands of successful practice in home, school, or institution. To prosecute the work of this Course effectively, the student must have the equivalent of the usual four-year High School Course.

This Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings and desserts of various kinds.

A complete laboratory has recently been fitted up at large expense for the use of the Domestic Science Department, fully equipped for practical instruction in the several lines offered.

PSYCHOLOGY.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Comparative Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Child Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology are open as electives to College women.

PHYSIOLOGY.

The Course in Physiology, with special reference to Domestic Science, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects

of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on.

CHEMISTRY.

Descriptive Chemistry is taught by text-book, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the student.

1. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4. Chemistry of Foods. Food analysis is practiced in the laboratory, six hours a week. Full College Course. Prerequisites, Courses 1, 2, and 3.

UNIVERSITY CALENDAR

1917.

 SPRING RECESS.

Second Term Ends,.....	Wednesday, March 21
Third Term Begins,.....	Wednesday, March 28
Sermon before the Christian Association,.....	Sunday, April 8
Contest in Elocution,.....	Saturday, May 5
Exhibition of the Junior Class, College,.....	Friday, May 11
Examinations,.....	Tuesday to Friday, June 15
Exhibition, School of Music,.....	Friday, June 15
Baccalaureate Sermon,.....	Sunday, June 17
Examinations for Admission to College,.....	Monday, June 18
Meeting of the Alumnae,.....	Tuesday, June 19
Annual Meeting of the Trustees,.....	Tuesday, June 19
Annual Meeting of the Alumni,.....	Tuesday, June 19
Graduating Exercises of School of Music,.....	Tuesday, June 19
Oration before the Alumni,.....	Tuesday, June 19
ANNUAL COMMENCEMENT, the 67th.....	Wednesday, June 20
Summer School begins,.....	Monday, July 2
Fall Examinations for Admission to College,	

Wednesday, September 19

First Term Begins,.....	Thursday, September 20
Election of Class Officers, 3 p. m.,.....	Friday, September 21
Reception by Christian Association,.....	Saturday, September 22
Matriculation,.....	Tuesday, November 27
Thanksgiving,.....	Thursday, November 29
First Term Ends,.....	Wednesday, December 19

1918.

Second Term Begins,.....	Thursday, January 3
Second Term Ends,.....	Wednesday, March 20
Third Term Begins,.....	Wednesday, March 27

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No. 4



CATALOG

1917-1918



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THE

SIXTY-EIGHTH CATALOG

OF THE

OFFICERS AND STUDENTS

OF

Bucknell University:

COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1917-1918

RL

BUCKNELL UNIVERSITY

Founded, 1846

Presidents of the University.

1846-51 Stephen W. Taylor, LL.D.

1851-57 Howard Malcom, D.D., LL.D.

1858-79 Justin Rolph Loomis, Ph.D., LL.D.

1879-88 David Jayne Hill, LL.D.

1889 John Howard Harris, Ph.D., LL.D.

CALENDAR

The Winter Term Ends.....Wednesday, March 20, 1918

The Spring Term Begins....Wednesday, March 27, 1918

Annual Commencement Wednesday, June 19, 1918

Summer School Begins.....Monday, July 1, 1918

The Fall Term Begins Thursday, September 19, 1918

The Fall Term Ends Thursday, December 19, 1918

The Winter Term Begins.....Thursday, January 2, 1919

BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one million dollars. The productive investment amounts to over eight hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIET BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE, LOUISE BUCKNELL LITTLE, JOSEPH KERR WEAVER.

PATRONS (those who have given one thousand dollars or more, but less than ten thousand) have been: CHARLES F. ABBOTT, RALPH A. AMERMAN, E. A. ARMSTRONG, FRANCIS W. AYER, BENJAMIN BEAR, WILLIAM P. BEAVER, MARTIN BELL, EMMA W. BUCKNELL, WASHINGTON BUTCHER, SIMON CAMERON, LEVI B. CHRIST, ELISHA A. CORAY, WILLIAM J. COXEY, NETTIE DUNHAM CRARY, SAMUEL J. CRESWELL, GEORGE K. CROZER, J. LEWIS CROZER, MRS. J. LEWIS CROZER, ROBERT H. CROZER, JOHN C. DAVIS, THOMAS Y. ENGLAND, ISAAC FORD, MRS. ISAAC FORD, BENJAMIN GARTSIDE, MARY W. GETTER, THOMAS A. GILL, LEROY GLEASON, CALVIN GREEN, BENJAMIN GRIFFITH, CALVIN A. HARE, JOHN H. HARRIS, GEORGE HYDE, JAMES IRVING, ISRAEL JAMES, E. C. JAYNE, ADAM JOHNSTON, JOHN D. JOHNSON, WILLIAM W. KEEN, WILLIAM B. LEAS, ALEXANDER M. LLOYD, JUSTIN R. LOOMIS, FREEMAN LOOMIS, WILLIAM H. LUDWIG, J. C. MCKINNY, S. E. MCVITTY, JOSEPH MEIXELL, GEORGE BARRON MILLER, GEORGE F. MILLER, JAMES MOORE, JAMES MOORE, JR., H. J. MULFORD, JACOB G. NEAFIE, CHRISTIAN OVERHOLT, A. C. OVERHOLT, MARIA OVERHOLT, GEORGE PORTER, JACOB REESE, A. J. ROWLAND, J. C. SIBLEY, GEORGE M. SPRATT, ORLANDO W. SPRATT, W. H. STARBUCK, AMOS B. STILL, JAMES B. STEPHENSON, JOHN B. STETSON, JAMES S. SWARTZ, FRANCIS J. TORRANCE, ERNEST L. TUSTIN, N. STEWART WALL, CHARLES S. WALTON, MARTHA ENGLAND WALTON, THOMAS WATTSON, SAMUEL WOLF, SIMON P. WOLVERTON, S. D. YOUNG.

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalog of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees has authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the Loan Fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large active loan fund accumulates.

(f) A fund for the Retirement of Professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever.

CONDITIONAL GIFTS.

Gifts will be accepted by the University conditional upon the payment of an annuity to the donor during life.

ORGANIZATION.

I. **THE COLLEGE** offers ten Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence and Finance.
4. The Course in General Science.
5. The Course in Household Economics.
6. The Course in Biology.
7. The Course in Chemical Engineering.
8. The Course in Civil Engineering.
9. The Course in Electrical Engineering.
10. The Course in Mechanical Engineering.

II. **THE DEPARTMENT OF MUSIC** has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

THE BOARD OF TRUSTEES

CHAIRMAN, JAMES S. SWARTZ, A.M.,

11 Broadway, New York City.

SECRETARY, A. JUDSON ROWLAND, D.D., LL.D.,

1701 Chestnut Street, Philadelphia.

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LEROY P. LEAS,

JOSEPH K. WEAVER, A.M., M.D.

HON. HAROLD M. McCLURE, A.M.

S. LEWIS ZIEGLER, M.D., LL.D.

MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January in Philadelphia.

* Deceased.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION.

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MILTON G. EVANS, D.D., LL.D.

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AND THE PRESIDENT.

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HON. HAROLD M. McCCLURE, A.M., *Chairman.*

HON. CHARLES MILLER, A.M.

PRES. JOHN H. HARRIS, LL.D.

S. LEWIS ZIEGLER, M.D., LL.D.

COMMITTEE ON PUBLICATION.

LEROY STEPHENS, D.D., *Chairman.*

MILTON G. EVANS, D.D.

AND THE PRESIDENT.

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, Museum of Natural History and Recitation rooms.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms, and for recitation rooms and offices.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Association, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE FIRST BUILDING.

The **First Building** on College Hill, erected in 1846, is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Registrar's private office; on the second floor are suites of rooms for the Registrar and his family and for the Matron. The third floor is used as a Laboratory of Biology.

V. BUCKNELL COTTAGE FOR MEN.

The **Bucknell Cottage** for men is contiguous to the First Building and is connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet in width, and is finished in natural wood. The building contains a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

VI. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College, in which the students of the College meet for worship.

VII. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D.C.L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred thousand volumes.

VIII. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteen wire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

IX. THE CHEMICAL LABORATORY.

The Laboratory is forty-three feet in width and eighty-six feet in length, with two stories above the basement.

In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Analysis; the basement has room for Applied Chemistry, and a fireproof room. The attic contains a room for dissection in Human Anatomy.

X. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the heating and lighting plant of the Institution; the main story, with one room twenty by fifty and another forty by forty-five, is used for shop work.

XI. THE FOUNDRY.

The Foundry, erected in 1915, is a building of brick, fitted up with all appliances requisite for the courses in molding and casting.

XII. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the room. At the height of twelve feet a running-track gallery, six feet side, surrounds the room.

XIII. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor

sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XIV. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College and in the School of Music.

1. **The Main Building** contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, recitation rooms, and a dining hall; on the second floor a schoolroom and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. **The South Hall**, erected in 1869, is devoted to students' rooms, except the third story, which is used as a Laboratory for the department of Domestic Science.

3. **The Bucknell Cottage** stands to the southwest of the Main Building, and is connected with it by an enclosed passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat, and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and

closets on either side. In this building is the **Studio**, a spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. **New Cottage** for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The **Calisthenium** occupies the upper story, and has a floor surface of over four thousand feet.

5. **The Annex.** An additional residence building has been secured which accommodates twenty College women.

The **Campus** of the Women's College is separated from the main College grounds by Loomis Street.

XV. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XVI. THE PRESIDENT'S HOUSE.

The Corporation owns a house for the use of the President of the University.

THE COLLEGE

THE FACULTY.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

MISS ANNA ROBERTA CAREY, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN.

NELSON FITHIAN DAVIS, SC.D.,
DEAN OF THE SUMMER SCHOOL.

ENOCH PERRINE, LITT.D.,
SECRETARY OF THE FACULTY.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
LIBRARIAN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR OF THE UNIVERSITY.

FRANK EUGENE BURPEE, A.M.,
SUPERINTENDENT OF BUILDINGS AND GROUNDS.

* FREEMAN LOOMIS, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES AND LITERATURE.

WILLIAM CYRUS BARTOL, A.M., PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

FRANK ERNEST ROCKWOOD, A.M., LL.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE.
(EMERITUS.)

WILLIAM GUNDY OWENS, A.M.,
PROFESSOR OF CHEMISTRY.

ENOCH PERRINE, A.M., LITT.D.,
PROFESSOR OF THE ENGLISH LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D.,
NEW JERSEY PROFESSOR OF THE GREEK LANGUAGE AND LITERATURE.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
PROFESSOR OF LOGIC AND SOCIOLOGY.

NELSON FITHIAN DAVIS, SC.D.,
PROFESSOR OF BIOLOGY.

EPHRAIM M. HEIM, PH.D.,
PROFESSOR OF ECONOMIC AND POLITICAL SCIENCE.

GUIDO CARL LEO RIEMER, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES.

LLEWELLYN PHILLIPS, A.M., D.D.,
JOHN P. CROZER PROFESSOR OF EDUCATION.

HENRY THOMAS COLESTOCK, A.M., PH.D.,
PROFESSOR OF HISTORY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND MECHANICAL DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FLOYD GEORGE BALLENTINE, PH.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR OF MECHANICAL ENGINEERING.

BUCKNELL UNIVERSITY

MARTIN LINNAEUS DRUM, A.M.,
PROFESSOR OF SURVEYING.

NORMAN HAMILTON STEWART, A.B., SC.M.,
PROFESSOR OF BIOLOGY.

BENJAMIN W. GRIFFITH, A.M.,
PROFESSOR OF FRENCH.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

CHARLES CARPENTER FRIES, A.M.,
PROFESSOR OF RHETORIC.

BROMLEY SMITH, A.M.,
INSTRUCTOR IN ORATORY.

LEO LAWRENCE ROCKWELL, A.M.,
INSTRUCTOR IN SPANISH AND GERMAN.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

HARRY SCHEIDY EVERETT, A.M., SC.M.,
INSTRUCTOR IN MATHEMATICS.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
INSTRUCTOR IN CHEMISTRY.

JOHN WILLIAM RICE, SC.M.,
INSTRUCTOR IN BIOLOGY.

* GARDNER WADE EARLE, A.M.,
INSTRUCTOR IN RHETORIC.

HAROLD MURRAY McCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND NOTES AND ON AGENCY.

THOMAS WOOD, A.M., LL.B.,
LECTURER ON REAL PROPERTY.

ADMISSION OF STUDENTS

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

Three of these units are equal to one Carnegie unit.

Candidates for admission to any of the Courses must pass examination in the following:

I. GENERAL REQUIREMENTS.

1. ENGLISH (nine units).

a. Writing from dictation.

b. English Grammar.

c. Elements of Rhetoric—Invention, Style, and Punctuation.

d. A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. Reading.—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple questions on the lives of the authors. The form of examination

will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics (three units); or Chemistry (three units).

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's *Anabasis*;
 - e. Three Books of Homer's *Iliad*.
2. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*.
2. SOLID GEOMETRY (one unit).
3. Any eight units selected from group E.

C. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's *Anabasis*;
 - e. Three Books of Homer's *Iliad*.
2. SOLID GEOMETRY (one unit).
3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN, FRENCH, SPANISH, or ITALIAN.

The Grammar of the Language, Composition and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the College Entrance Examination Board are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the

Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismissal. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his deportment that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismission given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismission be granted to any student who has not discharged all his pecuniary obligations to the Institution. No papers of dismission or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismission are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers ten Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of

which extends through two years of the Course and the latter through four years, and also twelve lecture courses.

Only major subjects taken in class are accepted for the Bachelor's degree.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three courses in German, French or Spanish.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four courses of German, French, Spanish, or Italian, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College courses in either of the Ancient Classical languages or nine College courses in English, German, or French in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The Course in Jurisprudence is designated for persons preparing for the legal profession, for a business career, and for participation in public affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or French for admission and at least four courses of college work in German, French, or Spanish as requisites for graduation.

V. The Course in General Science, Division of Household Economics, leading to the degree of Bachelor of Science, covers four years of work in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science, together with other subjects important to a liberal education.

VI. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VII. The Course in Chemical Engineering, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Engineering if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VIII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

IX. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

X. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

XI. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the

Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

THE SUB-FRESHMAN CLASS.

The sub-freshman class is designed to fit young men or women to enter any of the Courses in College. Graduates of High Schools with two or with three years' Courses or their equivalents, are admitted and assigned to such work as will enable them to enter with advantage upon college studies.

Classes are formed at the beginning of the scholastic year in such subjects as may be required in Greek, Latin, Mathematics, and Science. Fuller information may be obtained from the Registrar.

HOUSEHOLD ECONOMICS.

The Course in Household Economics offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Household Economics.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology, and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy, and home decoration, gained by the diligent student will meet the demands of successful practice in home, school, or institution. To enter upon this Course, the student must have the usual for-year High School Course.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

The Course in Household Economics is intended to fit young women to teach Household Economics in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- | | |
|-------------------------------|--------------|
| I. TERM—Solid Geometry, | Rhetoric, I, |
| Cicero de Senectute and Livy, | Oratory, I. |
| Greek, | |
| II. TERM—Higher Algebra, | Rhetoric, I, |
| Livy, | Oratory, I. |
| Greek, | |
| III. TERM—Trigonometry, | Rhetoric, I, |
| Cicero de Officiis, | Oratory, I. |
| Greek, | |

SOPHOMORE YEAR.

- | | |
|-----------------------------|--------------------|
| I. TERM—English Literature, | Astronomy, I, or |
| Horace, | History of Art, I, |
| Oratory, I. | |

ELECTIVE STUDIES:

<i>German,</i> <i>French,</i> <i>Spanish,</i> <i>Italian,</i> <i>Greek History.</i>	<i>American History, a,</i> <i>Chemistry,</i> <i>Surveying,</i> <i>Analytical Geometry.</i>
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|--------------------|--------------------|
| II. TERM—Rhetoric, | Astronomy, I, or |
| Greek, | History of Art, I, |
| Oratory, I. | |

ELECTIVE STUDIES:

<i>Roman History,</i>	<i>Italian,</i>
<i>American History, b,</i>	<i>Logic,</i>
<i>Latin, 6,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Differential Calculus,</i>
<i>French,</i>	<i>Advanced Algebra,</i>
<i>Spanish,</i>	<i>Physiology.</i>

III. TERM—Civics, or Economic History, History of Art, I, or
or Constitutional Law, South America, I.

ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Italian,</i>
<i>Argumentation,</i>	<i>Anthropology,</i>
<i>American Literature,</i>	<i>Child Psychology,</i>
<i>Greek,</i>	<i>Botany,</i>
<i>Juvenal,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Integral Calculus,</i>
<i>French,</i>	<i>Elements of Law,</i>
<i>Spanish,</i>	<i>Astronomy,</i>

JUNIOR YEAR.

I. TERM { Psychology, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>Sociology,</i>
<i>Latin, 8,</i>	<i>History of Education, a,</i>
<i>English, 6 or 7,</i>	<i>Teachers' Mathematics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Entomology,</i>
<i>Economics,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>Constitutional Law,</i>	<i>Geology.</i>

II. TERM { Ethics, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Comparative Psychology,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>Journalism,</i>	<i>Animal Histology, a,</i>
<i>German,</i>	<i>Human Anatomy, a,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>English Bible,</i>	<i>Higher Analytics,</i>
<i>History, English, a,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Physics,</i>
<i>Money and Banking,</i>	<i>Municipal Government,</i>
<i>Contracts,</i>	<i>History of Education, b.</i>

III. TERM—History of Philosophy,
Thesis,

Religious Education, I,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Latin, 10,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Physics.</i>
<i>Psychology of Education,</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Principles of Education,</i>
<i>Latin, 11,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Geology,</i>
<i>French,</i>	<i>Geodetic Astronomy,</i>
<i>Medieval History,</i>	<i>Personal Property,</i>
	<i>Advanced Ethics.</i>

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Philosophy of Mind,</i>
<i>Latin, 12,</i>	<i>History, 11,</i>
<i>Roman Life,</i>	<i>History of Europe, a,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Theories of Education,</i>	<i>Economic Geology,</i>
<i>Agency,</i>	<i>Human Anatomy, b.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>History of Europe, b,</i>
<i>Latin, 13,</i>	<i>Private Corporations,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Chemistry,</i>
<i>History of Philosophy,</i>	<i>Forestry,</i>
<i>Secondary Education,</i>	<i>Railroad Transportation,</i>
<i>Advanced Composition.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

I. TERM—Higher Algebra,	Rhetoric, I,
Cicero de Senectute and Livy,	Oratory, I.
German or French or Spanish,	
or Italian,	

II. TERM—Trigonometry,	Rhetoric, I,
Livy,	Oratory, I.
German or French or Spanish,	
or Italian,	

- III. TERM—Cicero de Officiis, Rhetoric, I,
 Analytical Geometry Oratory, I.
 or Astronomy,
German or French or Spanish, or Italian,

SOPHOMORE YEAR.

- I. TERM—English Literature, Astronomy, I, or
 Horace, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>American History, a,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Spanish,</i>	<i>Surveying,</i>
<i>Greek History,</i>	<i>Analytics.</i>

- II. TERM—Rhetoric, Astronomy, I, or
 Oratory, I, History of Art, I.

ELECTIVE STUDIES:

<i>Roman History,</i>	<i>Spanish,</i>
<i>American History, b,</i>	<i>Physiology,</i>
<i>Latin, 6,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Differential Calculus,</i>
<i>French,</i>	<i>Advanced Algebra,</i>
<i>Logic.</i>	

- III. TERM—Civics or Economic History, History of Art, I, or
 or Constitutional Law, South America, I.

ELECTIVE STUDIES:

<i>Argumentation,</i>	<i>Spanish,</i>
<i>Public Address,</i>	<i>Anthropology,</i>
<i>American Literature,</i>	<i>Elementary Law,</i>
<i>Juvenal,</i>	<i>Botany,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Integral Calculus,</i>
<i>Child Psychology.</i>	

JUNIOR YEAR.

I. TERM	{ Psychology, Thesis,	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>Latin, 8,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Entomology,</i>
<i>English, 6 or 7,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>Sociology,</i>	<i>History of Education, a,</i>
<i>Constitutional Law,</i>	<i>Teachers' Mathematics.</i>

II. TERM	{ Ethics, Thesis,	Sanitary Science, I.
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ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Contracts,</i>
<i>English, 8,</i>	<i>Advanced Logic,</i>
<i>Journalism,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>History of Education, b.</i>	

III. TERM—History of Philosophy,	Religious Education, I. Thesis.
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ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Cryptogamic Botany,</i>	<i>Physics,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin</i> , 11,	<i>Principles of Education</i> ,
<i>German</i> ,	<i>International Law</i> ,
<i>French</i> ,	<i>Personal Property</i> ,
<i>Anglo-Saxon</i> ,	<i>Comparative Anatomy</i> ,
<i>English</i> , 4 or 9,	<i>Chemistry</i> ,
<i>Medieval History</i> ,	<i>Geology</i> ,
<i>Advanced Ethics</i> ,	<i>Geodetic Astronomy</i> .

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin</i> , 12,	<i>Roman Private Life</i> ,
<i>Chaucer</i> ,	<i>Comparative Politics</i> ,
<i>German</i> ,	<i>Public Finance</i> ,
<i>French</i> ,	<i>Chemistry</i> ,
<i>History of Europe</i> , a,	<i>Economic Geology</i> ,
<i>Philosophy of Mind</i> ,	<i>Human Anatomy</i> , b,
<i>Theories of Education</i> ,	<i>Agency</i> .

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Latin</i> , 13,	<i>Secondary Education</i> ,
<i>German</i> ,	<i>Roman Law</i> ,
<i>French</i> ,	<i>Private Corporations</i> ,
<i>Shakspeare</i> ,	<i>Chemistry</i> ,
<i>History of Philosophy</i> ,	<i>Forestry</i> ,
<i>History of Europe</i> , b,	<i>Railroad Transportation</i> ,
<i>Bills and Notes</i> ,	<i>Advanced Composition</i> .

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

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|---|-----------------------------|
| I. TERM—Higher Algebra,
Greek,
<i>German or French or Spanish</i>
<i>or Italian,</i> | Rhetoric, I,
Oratory, I. |
| II. TERM—Trigonometry,
Greek,
<i>German or French or Spanish</i>
<i>or Italian,</i> | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry
or Astronomy,
<i>Greek,</i>
<i>German or French or Spanish</i>
<i>or Italian,</i> | Rhetoric, I,
Oratory, I. |

SOPHOMORE YEAR.

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|---|---|
| I. TERM—English Literature,
Greek History, | Astronomy, I, or
History of Art, I,
Oratory, I. |
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ELECTIVE STUDIES:

<i>American History, a,</i> <i>German,</i> <i>Spanish,</i>	<i>French,</i> <i>Chemistry,</i> <i>Surveying.</i>
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| II. TERM—Rhetoric,
Greek, | Astronomy, I, or
History of Art, I.
Oratory, I. |
|------------------------------|---|

ELECTIVE STUDIES:

<i>German,</i> <i>French,</i> <i>Spanish,</i> <i>Roman History,</i> <i>American History, b,</i>	<i>Logic,</i> <i>Physiology,</i> <i>Chemistry,</i> <i>Differential Calculus,</i> <i>Advanced Algebra.</i>
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- III. TERM—Civics or Economic History, History of Art, I, or
or Constitutional Law, South America, I.

ELECTIVE STUDIES:

<i>Argumentation,</i>	<i>Spanish,</i>
<i>Public Address,</i>	<i>Integral Calculus,</i>
<i>American Literature,</i>	<i>Elements of Law,</i>
<i>Greek,</i>	<i>Botany,</i>
<i>German,</i>	<i>Anthropology,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Child Psychology.</i>	

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>History of Education, a,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English Bible,</i>	<i>Biology,</i>
<i>English, 6 or 7,</i>	<i>Entomology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Sociology,</i>	<i>Mechanics,</i>
<i>Constitutional Law,</i>	<i>Teachers' Mathematics.</i>

- II. TERM { Ethics, Sanitary Science, I.
Thesis,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>Municipal Sociology,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>History of Education, b,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>Journalism,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English,</i>	<i>Chemistry,</i>
<i>Money and Banking,</i>	<i>Mathematics, 9,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Advanced Logic,</i>	<i>Higher Analytics,</i>
<i>Contracts.</i>	

III. TERM—History of Philosophy,
Thesis,

Religious Education, I,

ELECTIVE STUDIES:

<i>Greek,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, 6,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Zoölogy of Vertebrates,</i>	<i>Physics,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Advanced Ethics,</i>
<i>Anglo-Saxon,</i>	<i>Principles of Education,</i>
<i>English, 4 or 9,</i>	<i>International Law,</i>
<i>German,</i>	<i>Personal Property,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Geology.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek Testament,</i>	<i>Theories of Education,</i>
<i>Chaucer,</i>	<i>Roman Life,</i>
<i>German,</i>	<i>Comparative Politics,</i>
<i>French,</i>	<i>Public Finance,</i>
<i>Philosophy of Mind,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Agency,</i>	<i>Human Anatomy, b.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Secondary Education,</i>
<i>French,</i>	<i>History of Europe, b,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
<i>Bills and Notes,</i>	<i>Advanced Composition.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
Greek,
 or *German,*
 or *French,*
 or *Spanish,*
 or *Italian,*
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
Greek,
 or *German,* or *French,*
 or *Spanish,*
 or *Italian,*
- III. TERM—Civics, Rhetoric, I,
 Cicero de Officiis, Oratory, I.
 Plato's Apology,
 or *German,*
 or *French,*
 or *Spanish,*
 or *Italian,*

SOPHOMORE YEAR.

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|-----------------------------|-----------------------|
| I. TERM—English Literature, | Political Science, I, |
| Horace, | Oratory, I. |

ELECTIVE STUDIES:

<i>Greek History,</i>	<i>German,</i>
<i>American History, a,</i>	<i>Surveying,</i>
<i>French,</i>	<i>Chemistry.</i>
<i>Spanish,</i>	

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| II. TERM—Rhetoric, | Political Science, I, |
| Logic, | Oratory, I. |

ELECTIVE STUDIES:

<i>Greek Demosthenes,</i>	<i>American History, b,</i>
<i>Quintilian,</i>	<i>German,</i>
<i>Roman History,</i>	<i>French,</i>
<i>Spanish.</i>	

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| III. TERM—Elements of Law, | Political Science, I. |
| Constitutional Law, | |

ELECTIVE STUDIES:

<i>Juvenal,</i>	<i>Economic History,</i>
<i>German,</i>	<i>American Literature,</i>
<i>French,</i>	<i>Argumentation,</i>
<i>Spanish,</i>	<i>Public Address,</i>
<i>Child Psychology.</i>	

JUNIOR YEAR.

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|---------------------|----------------|
| I. TERM—Psychology, | Blackstone, I, |
| Economics, | Thesis. |

ELECTIVE STUDIES:

<i>Real Property, Blackstone B. II,</i>	<i>English Bible,</i>
<i>English History,</i>	<i>Latin, 8,</i>
<i>Sociology,</i>	<i>Greek Tragedy,</i>
<i>History of Education, a,</i>	<i>English Literature,</i>
<i>Modern Language.</i>	

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| II. TERM—Ethics, | Blackstone, I, |
| Money and Banking, | Thesis. |

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Modern Language,</i>	<i>Journalism,</i>
<i>History of Education, b.</i>	

III. TERM—History of Philosophy,	Blackstone, I,
Private Corporations,	Thesis.

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM—International Law,	{ Social Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Personal Property,</i>	<i>Latin, 11,</i>
<i>Medieval History,</i>	<i>Modern Language,</i>
<i>Anglo-Saxon,</i>	<i>Advanced Ethics,</i>
<i>English Literature,</i>	<i>Principles of Education.</i>

II. TERM—Comparative Politics,	{ Political Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Agency,</i>	<i>Demosthenes de Corona,</i>
<i>Public Finance,</i>	<i>Latin, 12,</i>
<i>Modern Europe, a,</i>	<i>Chaucer,</i>
<i>Philosophy of Mind,</i>	<i>Modern Language,</i>
<i>Theories of Education.</i>	

III. TERM—Roman Law,	Literature, I.
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ELECTIVE STUDIES:

<i>Bills and Notes,</i>	<i>Plato's Phædo,</i>
<i>Railroad Transportation,</i>	<i>Latin, 13,</i>
<i>Modern Europe, b,</i>	<i>Modern Language,</i>
<i>History, 9,</i>	<i>Secondary Education,</i>
<i>Shakspere,</i>	<i>Advanced Composition, a.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

IV. THE GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

I. TERM—Higher Algebra,	Rhetoric, I,
Latin,	Oratory, I.
German or French,	
or Spanish or Italian,	

II. TERM—Trigonometry,	Rhetoric, I,
Latin,	Oratory, I.
German or French,	
or Spanish or Italian,	

III. TERM—Analytical Geometry,	Rhetoric, I,
or Astronomy,	Oratory, I.
Latin,	
German or French,	
or Spanish or Italian,	

SOPHOMORE YEAR.

I. TERM—English Literature,	Astronomy, I, or
	History of Art, I,
	Oratory, I.

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Spanish,</i>
<i>Horace,</i>	<i>Greek History,</i>
<i>German,</i>	<i>American History, a,</i>
<i>French,</i>	<i>Surveying.</i>

II. TERM—Rhetoric,

Astronomy, I, or
History of Art, I,

Oratory, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>Logic,</i>
<i>French,</i>	<i>Physiology,</i>
<i>Spanish,</i>	<i>Chemistry,</i>
<i>Roman History,</i>	<i>Differential Calculus,</i>
<i>American History, b,</i>	<i>Advanced Algebra.</i>

III. TERM—Civics or Economic History,
or Constitutional Law,History of Art, I, or
South America, I.

ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Elements of Law,</i>
<i>American Literature,</i>	<i>Anthropology,</i>
<i>Argumentation,</i>	<i>Botany,</i>
<i>Juvenal,</i>	<i>Integral Calculus,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Child Psychology.</i>
<i>Spanish,</i>	

JUNIOR YEAR.

I. TERM { Psychology,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology.</i>
<i>French,</i>	<i>Biology,</i>
<i>English Bible,</i>	<i>Embryology,</i>
<i>History, Oriental,</i>	<i>Entomology,</i>
<i>Sociology,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics,</i>
<i>History of Education, a,</i>	<i>Teachers' Mathematics,</i>
<i>Constitutional Law.</i>	

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>English, 8,</i>	<i>History of Education, b,</i>
<i>Journalism,</i>	<i>Contracts,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English Bible,</i>	<i>Animal Histology, a,</i>
<i>History, English,</i>	<i>Human Anatomy, a,</i>
<i>Money and Banking,</i>	<i>Chemistry,</i>
<i>Municipal Government,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Physics.</i>	

III. TERM—History of Philosophy, Religious Education, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>German,</i>	<i>Bateriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Chemistry,</i>
<i>Psychology of Education.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Anglo-Saxon,</i>	<i>Principles of Education,</i>
<i>English, 4 or 9,</i>	<i>Advanced Ethics,</i>
<i>German,</i>	<i>International Law,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Personal Property,</i>	<i>Geology,</i>
<i>Geodetic Astronomy.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>Theories of Education,</i>
<i>French,</i>	<i>Roman Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>Philosophy of Mind,</i>	<i>Public Finance,</i>
<i>Modern Europe, a,</i>	<i>Chemistry,</i>
<i>History, 11,</i>	<i>Economic Geology,</i>
<i>Agency.</i>	

III. TERM—Literature, I, or
Forestry, 1.

ELECTIVE STUDIES:

<i>German,</i>	<i>Secondary Education,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry,</i>
<i>Advanced Composition, a.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding Terms.

V. GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

B. DIVISION OF HOUSEHOLD ECONOMICS.

FRESHMAN YEAR.

I. TERM—Chemistry,	Cookery, IV,
General Psychology,	Rhetoric, I,
French,	Physical Training, II.
II. TERM—Chemistry,	Cookery, IV,
Personal Hygiene,	Rhetoric, I,
{ Home Nursing,	Physical Training, II.
{ Emergencies,	
French,	

III. TERM—Chemistry,	Rhetoric, I,
Cookery, IV,	Physical Training, II.
French,	

SOPHOMORE YEAR.

I. TERM—Chemistry of Foods,	Cookery, IV,
Biology,	Sewing, II.
Literature,	
II. TERM—Dietetics and Invalid	Cookery, IV,
Cookery,	Sewing, II.
Physiology,	
Rhetoric,	
III. TERM—Child Psychology,	Cookery, IV,
Botany,	Sewing, II.
Home Economics,	

JUNIOR YEAR.

I. TERM—Bacteriology,	Sanitary Science, I,
Physics, 6,	Experimental Cookery, II,
	Sewing, II.

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Sociology,</i>
<i>German,</i>	<i>Psychology,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>Spanish,</i>	<i>Embryology,</i>
<i>Italian,</i>	<i>Entomology,</i>
<i>English Bible,</i>	<i>Chemistry, Organic,</i>
<i>History, Oriental,</i>	<i>History of Education, a.</i>

II. TERM—Comparative Psychology,	Sanitary Science,
	Experimental Cookery, II,
	Sewing, II.

ELECTIVE STUDIES:

<i>English, 8,</i>	<i>English Bible,</i>
<i>German,</i>	<i>History, English,</i>
<i>French,</i>	<i>History of Education, b,</i>
<i>Spanish,</i>	<i>Zoölogy of Invertebrates,</i>
<i>Italian,</i>	<i>Animal Histology, a,</i>
	<i>Chemistry, Organic.</i>

III. TERM—Commerce and Banking.

Institutional Cookery, IV.

ELECTIVE STUDIES:

<i>German,</i>	<i>History of Philosophy,</i>
<i>French,</i>	<i>Psychology of Education,</i>
<i>Spanish,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Italian,</i>	<i>Cryptogamic Botany,</i>
<i>English Bible,</i>	<i>Histology, b,</i>
<i>Chemistry, Organic.</i>	

SENIOR YEAR.

I. TERM—Nutrition,

Social Ethics, I,
Practice Teaching, II,
Thesis.

ELECTIVE STUDIES:

<i>English, 4, or 9,</i>	<i>Medieval History,</i>
<i>German,</i>	<i>Principles of Education,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Geology.</i>	

II. TERM—Household Art and
Designing,

Political Ethics, I,
Practice Teaching, I,
Invalid Cookery, II,
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>History, 11,</i>
<i>French,</i>	<i>Theories of Education,</i>
<i>Chaucer,</i>	<i>Roman Life,</i>
<i>Philosophy of Mind,</i>	<i>Comparative Politics,</i>
<i>History of Europe, a,</i>	<i>Public Finance.</i>

III. TERM—Secondary Education,

Demonstration Cookery,
II,
Practice Teaching, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>History of Philosophy,</i>
<i>French,</i>	<i>History of Europe, b,</i>
<i>Shakspeare,</i>	<i>Advanced Composition.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

Students who have completed the Freshman and Sophomore Years of the Domestic Science Course may receive certificates covering the work done.

VI. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

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| I. TERM—Algebra,
General Chemistry,
<i>German</i> ,
or <i>French</i> , | Rhetoric, I,
Oratory, I. |
| II. TERM—Trigonometry,
General Chemistry,
<i>German</i> ,
or <i>French</i> , | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry,
Qualitative Chemistry,
<i>German</i> or <i>French</i> , | Rhetoric, I,
Oratory, I. |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric,
Biology,
Quantitative Chemistry, | Drawing, I,
Scientific German, II,
or French, II. |
| II. TERM—Invertebrate Zoölogy,
Physiology, | Drawing, I,
Scientific German, II,
or French, II. |

ELECTIVE STUDIES:

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| <i>History</i> ,
<i>Modern Language</i> , | <i>Chemistry</i> ,
<i>Differential Calculus</i> . |
| III. TERM—Vertebrate Zoölogy,
Botany, | Drawing, I,
Scientific German, II,
or French, II. |

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Civics,</i>
<i>Anthropology,</i>	<i>American Literature,</i>
<i>Integral Calculus,</i>	<i>Modern Language,</i>
<i>Economic History,</i>	<i>Child Psychology.</i>

JUNIOR YEAR.

I. TERM—Psychology,	Sanitary Science,
Mechanics,	Thesis.

ELECTIVE STUDIES:

<i>Entomology,</i>	<i>Physiological Psychology,</i>
<i>Organic Chemistry.</i>	

II. TERM—Comparative Psychology,	Sanitary Science,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Organic Chemistry,</i>	<i>Human Anatomy, a.</i>

III. TERM—Neurology,	History of Art,
Physics,	or South America,
	Thesis.

ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language,</i>
<i>Cryptogamic Botany.</i>	

SENIOR YEAR.

I. TERM—Comparative Anatomy,	{ Social Ethics, I,
Embryology,	
	Thesis.

ELECTIVE STUDIES:

<i>Geology,</i>	<i>Modern Language,</i>
<i>Economics,</i>	<i>Organic Chemistry,</i>
<i>History,</i>	<i>English Bible,</i>
<i>History of Education, a,</i>	<i>Plant Ecology,</i>

- II. TERM—Histology, { Political Ethics, I,
} Thesis.

ELECTIVE STUDIES:

<i>Human Anatomy, b,</i>	<i>History,</i>
<i>Economic Geology,</i>	<i>English Bible,</i>
<i>Money and Banking,</i>	<i>Modern Language,</i>
<i>Chemistry,</i>	<i>History of Education, b.</i>

- III. TERM—Bacteriology, Forestry, I.

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Literature,</i>
<i>Railroad Transportation,</i>	<i>English Bible,</i>
<i>Forestry,</i>	<i>Modern Language,</i>
<i>History,</i>	<i>Advanced Composition, b.</i>
<i>Secondary Education.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CHEMICAL ENGINEERING.

Leading to the First Degree in Chemical Engineering.

FRESHMAN YEAR.

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| <p>I. TERM—Chemistry,
 Higher Algebra,
 German or French,
 or Spanish or Italian,</p> | <p>Rhetoric, I,
 Drawing, IV.</p> |
| <p>II. TERM—Chemistry,
 Trigonometry,
 German or French,
 or Spanish or Italian,</p> | <p>Rhetoric, I,
 Drawing, IV.</p> |
| <p>III. TERM—Chemistry,
 Analytical Geometry,
 German or French,
 or Spanish or Italian,</p> | <p>Rhetoric, I,
 Shopwork, IV.</p> |

SOPHOMORE YEAR.

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|--|---|
| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | History of Art, I, or
South America, I,
Shopwork, II. |

JUNIOR YEAR.

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|--|---|
| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I, or
French Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | German Chemistry, I, or
French Chemistry, I,
Chemical Thesis. |
| III. TERM—Organic Chemistry,
Spectrum Analysis,
<i>Agricultural Chemistry</i> , 2 or
<i>Boilers and Engines</i> , | German Chemistry I, or
French Chemistry, I,
Chemical Thesis. |

SENIOR YEAR.

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|--|-------------------------------------|
| I. TERM—Physical Chemistry,
{ Chemical Preparations,
{ Industrial Chemistry,
<i>Geology</i> , or
<i>Surveying</i> , | { Social Ethics, I,
{ Thesis. |
| II. TERM—Physical Chemistry,
{ Chemical Preparations,
{ Industrial Chemistry,
<i>Direct Current Machinery</i> , or
<i>Hydraulic Motors</i> , or
<i>Economic Geology</i> , | { Political Ethics, I,
{ Thesis. |

- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
 Alternating Current Machinery,
 or Water Supply, or Ad-
 vanced Composition, b,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VIII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

- I. TERM.—Higher Algebra, Rhetoric, II,
 Drawing, Oratory, I.
 German or French,
 or Spanish or Italian,
- II. TERM.—Trigonometry, Rhetoric, II,
 Drawing, Oratory, I.
 German or French,
 or Spanish or Italian,
- III. TERM.—Analytical Geometry, Rhetoric, I,
 Drawing, Shopwork, IV.
 German or French,
 or Spanish or Italian,

SOPHOMORE YEAR.

- I. TERM.—Rhetoric, Geodesy, I,
 Surveying, Shopwork, IV.
 Chemistry,
- II. TERM.—Differential Calculus, Geodesy, I,
 Descriptive Geometry, Shopwork, IV.
 Chemistry,

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| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |
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JUNIOR YEAR.

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|--|-------------------------------------|
| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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|---|---------------------------------------|
| I. TERM—Bridges and Buildings,
Geodetic Astronomy,
<i>Electrical Measurements</i> , or
<i>Geology</i> or
<i>Theoretical Mechanics</i> , | { Social Ethics, I,
Thesis. |
| II. TERM—Hydraulic Motors,
Bridges and Buildings,
<i>Direct Current Machinery</i> , or
<i>Economic Geology</i> or
<i>Advanced Physics</i> , | { Political Ethics, I,
Thesis. |
| III. TERM—Bridges and Buildings,
{ Mine Surveying,
City Surveying,
<i>Alternating Current Machinery</i>
or <i>Railroad Transportation</i> or
<i>Advanced Physics</i> or
<i>Forestry</i> , or <i>Advanced Com-</i>
<i>position</i> , b, | Contracts and Specifica-
tions, I. |

IX. THE COURSE IN ELECTRICAL ENGINEERING.

*Leading to the First Degree in Electrical Engineering.***FRESHMAN YEAR.**

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|---|-------------------------------|
| I. TERM—Higher Algebra,
Drawing,
<i>German or French,</i>
<i>or Spanish or Italian,</i> | Rhetoric, II,
Oratory, I. |
| II. TERM—Trigonometry,
Drawing,
<i>German or French,</i>
<i>or Spanish or Italian,</i> | Rhetoric, II,
Oratory, I. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German or French,</i>
<i>or Spanish or Italian,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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|---|---|
| I. TERM—Rhetoric,
Mechanics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | Astronomy, I, or
South America, I,
Shopwork, II. |

JUNIOR YEAR.

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|--|--|
| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry, or</i>
<i>Theoretical Mechanics, or</i>
<i>Surveying,</i> | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |

- III. TERM—Alternating Current Machinery, Machine Design
 Advanced Physics, and Tools, I,
 Boilers and Engines, Thesis.

SENIOR YEAR.

- I. TERM—Design of Electrical Ma- { Social Ethics, I,
 chinery, { Thesis.
 Electrical Generating Sta-
 tions and Transmis-
 sion,
 Graphical Analysis of Struc-
 tures,
- II. TERM—Design of Electrical Ma- { Political Ethics, I,
 chinery, { Thesis.
 Telegraphs, Telephones, and
 Signaling Apparatus,
 Hydraulic Motors,
- III. TERM—Electric Lighting, Contracts and Specifica-
 Electric Railways, tions, I.
*Water Supply and Sanitary
 Engineering, or Advanced
 Composition, b,*

X. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

- I. TERM—Advanced Algebra, Rhetoric, I,
 Drawing, Shopwork, II.
*German or French,
 or Spanish or Italian,*
- II. TERM—Trigonometry, Rhetoric, I,
 Drawing, Shopwork, II.
*German or French,
 or Spanish or Italian,*

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|---|-------------------------------|
| III. TERM—Analytical Geometry,
Drawing,
<i>German or French,</i>
<i>or Spanish or Italian,</i> | Rhetoric, I,
Shopwork, IV. |
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SOPHOMORE YEAR.

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|---|---|
| I. TERM—Rhetoric,
Mechanics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Astronomy, I, or
History of Art, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | History of Art, I, or
South America, I,
Shopwork, IV. |

JUNIOR YEAR.

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|--|-------------------------------------|
| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry, or</i>
<i>Surveying,</i> | Shopwork, IV,
Machine Design, I. |
| II. TERM—Direct Current Machinery,
Thermo-Dynamics,
Metallurgy, | Shopwork, IV,
Machine Design, I. |
| III. TERM—Alternating Current
Machinery,
Thermo-Dynamics,
Boilers and Engines, | Shopwork, IV,
Machine Design, I. |

SENIOR YEAR.

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| I. TERM—Steam Engineering (49),
Design of Electrical Machinery,
Bridges and Buildings, | { Social Ethics, I,
Thesis,
Automobiles, IV. |
| II. TERM—Steam Engineering (50),
Design of Electrical Machinery,
Hydraulic Motors, | Political Ethics, I,
Thesis,
Heating and
Ventilation, IV. |

- III. TERM—Steam Engineering (50),
 Electric Lighting,
Water Supply and Sanitary En-
gineering, or Advanced Com-
position, b,
- Contracts, I,
 Refrigeration, IV.
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XI. THE TWO YEAR COURSE IN HOUSEHOLD ECONOMICS.

FIRST YEAR.

- I. TERM—Chemistry, 5,
 General Psychology, 5,
 Cookery { Principles, 1,
 { Practice, 4,
 Thesis,
 Physical Training, 2,
 Sewing, 2.
- II. TERM—Chemistry, 5,
 Personal Hygiene, 5,
 Cookery { Principles, 1,
 { Practice, 4,
 Thesis,
 Physical Training, 2,
 Art and Design, 1,
 Sewing, 2.
- III. TERM—Chemistry, 5,
 Home Nursing and Emer-
 gencies, 5,
 Cookery { Principles, 1,
 { Practice, 4,
 Thesis,
 Physical Training, 2,
 Household Decoration, 1,
 Sewing, 2.

SECOND YEAR.

- I. TERM—Chemistry of Foods, 5,
 Biology, 5,
 Cookery { Principles, 1,
 { Practice, 4,
 French, 5,
 Thesis,
 Physical Training, 2,
 Methods of Teaching Do-
 mestic Science, 1.
- II. TERM—French, 5,
 Cookery, 4,
 Invalid Cookery, 1,
 Dietetics and Domestic Sani-
 tation, 5,
 Thesis,
 Physical Training, 2,
 Methods of Teaching, 1.
- III. TERM—French, 5,
 Cookery, 4,
 Bacteriology, 5,
 Child Psychology, 5,
 Thesis,
 Methods of Teaching, 1,
 Household Manage-
 ment, 2.

Certificates of graduation are granted to students who complete the two year Course in Household Economics.

DEPARTMENTS OF INSTRUCTION

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented analytically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D., PROFESSOR.

The studies in this department embrace Psychology, Philosophy, Ethics, and Theism.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

4. **History of Philosophy.** Text-book and Lectures. Required of Juniors. Third term, five hours.

5. **Philosophy of Religion.** Third term, five hours.

6. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

7. **Roman Philosophy** (Latin 8.) Elective to Seniors and Juniors.—PROFESSOR BALLENTINE.

8. **Ethics.** Required of Juniors. Second term, five hours.

9. **Social Ethics—Domestic Relations.** Lectures. Required of Seniors. First term, one hour.

10. **Political Ethics—Duties of Citizenship.** Lectures. Required of Seniors. Second term, one hour.

11. **Ethics of Plato and Aristotle.** Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

II. DEPARTMENT OF EDUCATION.

LLEWELLYN PHILLIPS, D.D.,

PROFESSOR OF EDUCATION.

1. **History of Education, a. Ancient and Medieval.** Seniors and Juniors. First term, five hours.

2. **History of Education, b. Modern.** Seniors and Juniors. Second term, five hours.

3. **Principles of Education.** Seniors and Juniors. First term, five hours.

4. **Educational Theories.** Seniors and Juniors. Second term, five hours.

5. **Psychology of Education.** Seniors and Juniors. Third term, five hours.

6. **Comparative Psychology.** Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

7. **Child Psychology.** With special reference to teaching. Sophomores. Third term, five hours.—MISS CAREY.

8. **Secondary Education. Administration and Methods.** Seniors and Juniors. Third term, five hours.

9. **Religious Education.** Lectures. Second term, one hour, Juniors. Third term, one hour. Seniors and Juniors.

10. **Teachers' Course in Latin.** Special topics in grammar, with practical exercises in Cæsar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR BALLENTINE.

11. **Teachers' Course in English.** Designed to familiarize the student with the authors required for entrance to college with a view to teaching them.—PROFESSOR PERRINE.

12. **Teachers' Course in Mathematics.** Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools; reforms in arithmetical teaching. (b) Algebra: Its growth during the last three

centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry. Seniors and Juniors. First term.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Principles of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

TEACHERS' CERTIFICATES.

Teachers' Provisional Certificates of Pennsylvania are issued to graduates of Bucknell University good for three years; Permanent Certificates are issued upon three years' successful experience in teaching in the schools of the state. Teachers' Certificates are also issued to graduates of Bucknell University by the Department of Education, State of New York, State of New Jersey, and all other states which issue certificates to the graduates of any college.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

III. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,

ATTORNEY-AT-LAW,

LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,

PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT,

LECTURER ON PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,

ATTORNEY-AT-LAW,

LECTURER ON BILLS AND AGENCY.

THOMAS WOOD, A.M., LL.B.,

ATTORNEY-AT-LAW,

LECTURER ON REAL PROPERTY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing

upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History*, and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law in Pennsylvania without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B. I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—MR. WOOD.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—JUDGE JOHNSON.

5. **Contracts.** Text-books, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-book, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—MR. WOOD.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** First term, Seniors and Juniors.—PROFESSOR HEIM.

13. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

IV. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. **Corporate Finance and Commercial Law.** Organization and Management of Corporations. Corporation Finance. Form and Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. **Transportation and Commerce.** Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. **Industrial History of United States.** Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. **Economics.** Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. **American Civics.** A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. **American Constitutional Law.** Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.

10. **Comparative Politics.** A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

11. **Municipal Government.** Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

12. **International Law.** First term, five hours. Seniors and Juniors.

13. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

14. Political Science. Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

15. American Diplomacy. Minor Course, two hours.

V. DEPARTMENT OF SOCIOLOGY AND LOGIC.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. Anthropology, Descriptive and Physical. Elective to Sophomores. Third term, five hours.

2. Sociology, Principles and Theory. Elective to Seniors and Juniors. First term, five hours.

3. Charities and Reform. Seniors and Juniors. Second term, one hour. Prerequisite, Course 2.

4. Municipal Sociology. Seniors and Juniors. Second term, five hours.

5. History of Art. Lectures. Sophomores. Three terms, one hour. I. Painting; II. Sculpture; III. Architecture.

6. Logic, Deductive and Inductive. Second term, five hours.

7. Scientific Method, with Exercises in Analysis. Seniors and Juniors. Second term, five hours.

VI. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. Oriental History. A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. Hebrew History and Literature. First term, five hours.
—PROFESSOR PHILLIPS.

3. **New Testament History and Literature.** Second term, five hours.—PROFESSOR PHILLIPS.

4. **Greek Political and Constitutional History.** First term, five hours.—PROFESSOR HAMBLIN.

5. **Roman History.** Second term, five hours.—PROFESSOR ROCKWOOD.

6. **Roman Private Life.** Second term, five hours.—PROFESSOR BALENTINE.

7. **Medieval Europe.** General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.

8. **Modern Europe to 1789.** From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.

9. **Modern Europe since 1879.** The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.

10. **History of England, a.** Political and industrial development of the English people from the earliest times. Second term, five hours.

11. **Constitutional History of England, b.** With special reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.

12. **American Colonial History, a.** European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.

13. **American Constitutional History, b.** Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.

14. **Industrial History of United States.** Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. **Teachers' Course in American History.** General survey of American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VII. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

Students entering without preparation in the language can begin Greek in the College.

1. **Greek for Beginners.** An introduction to the Greek language based upon graded selections from Menander, Xenophon, Plato, Herodotus, and the New Testament. By an intensive study of the essential forms, a careful study of the vocabulary of representative Greek authors, and reading easy selections at sight, it is intended to cover in one year an equivalent of the usual Preparatory Course. Five hours a week through the first year.

2. **Plato.** The *Apology* and *Crito*. Special topics in Greek syntax. The life and influence of Socrates, Selections from the *Memorabilia* at Sight. First term, five hours a week.

3. **Homer.** Three or four books of the *Iliad* or *Odyssey*. Homeric forms. A study of life in the times of Homer. Second term, five hours a week.

4. **Lysias.** Select orations, with sight reading and Prose Composition. A study of Attic Oratory. Third term, five hours a week.

5 and 6. **Greek Drama.** One play each of Æschylus, Euripides, and Aristophanes. Study of the Greek drama, theater, and meters. The development of drama. First two terms, five hours a week, alternating with 7, in alternate years.

7. **New Testament Greek.** Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. First two terms in alternate years, alternating with 5 and 6.

8. **Greek History.** Political and Constitutional History of Greece. Influence of Greek institutions and thought on the world. Third term, five hours a week.

9. **Greek Literature in English.** A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

BIBLICAL HISTORY AND LITERATURE.

1. **New Testament Greek.** Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Two terms. Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

2. **Hebrew History and Literature.** Beginning of the nation to the Greek period. Seniors and Juniors. First term, five hours.—PROFESSOR PHILLIPS.

3. **New Testament History and Literature.** Greek period to close of Paul's life. Seniors and Juniors. Second term, five hours.—PROFESSOR PHILLIPS.

4. **Gospels and Post-Pauline Writings.** Seniors and Juniors. Third term, five hours.—PROFESSOR PHILLIPS.

VIII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

EMERITUS.

FLOYD GEORGE BALLENTINE, PH.D., PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (*selected speeches*) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. **Cicero.** *De Senectute*. *Livy*, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. **Livy.** Books XXI and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. **Cicero.** *De Officiis*. Cicero's standing as a philosopher. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. **Horace.** Selections from the Odes, Satires, and Epistles. Prosody; Historical Outlines of the Latin Language and Literature; Wilkins' Primer; Lectures. First term, Sophomore year, two divisions.

5. **Roman History.** The work is based on Meyer's Rise and Fall of Rome. Mommsen, Bury and Gibbon are used for supplementary reading. Second term, Sophomore year.

6. **Quintilian.** Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. **Juvenal.** Selected Satires. Third term; open to those who have taken Course 4.

8. **Roman Philosophy.** Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. **Plautus and Terence.** Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term, open to Seniors and Juniors; alternating with 14.

10. **Latin Inscriptions.** Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus.** Annals. Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Cæsar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.
17. **Classical Philology.** Introductory Course, one hour.

IX. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature.** Introductory Course. Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, first term, Sophomore.
2. **English Literature from 1832.** For those who have taken Course 1; alternating with Course 13.
3. **English Literature, 1790-1832:** Wordsworth, Coleridge, Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.
4. **English Literature, 1714-1790.** For those who have taken Course 1, and alternating with Course 15.
5. **English Literature, 1600-1660.** For those who have taken Course 1, and alternating with Course 8.
6. **Shakspeare.** Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.
7. **Shakspeare.** His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.
8. **The English Drama.** Its development from the earliest times to Shakspeare. For those who have taken Course 1, and alternating with Course 5.
9. **Teachers' Course in English.** Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to College. For those who have taken Course I, and alternating with Course 10.
10. **Principles of Literary Criticism.** For Seniors and Juniors, alternating with Course 9.
11. **American Literature,** with special reference to the national period. For those who have taken Course 1.
12. **Journalism,** a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For Juniors and Seniors who have taken Course 1.
13. **Anglo-Saxon.** Old English Language and Literature, with

special elective in *Beowulf*. For Juniors and Seniors who have taken Course 1.

14. Chaucer. Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's *The English Language*. For those who have taken Course 1.

15. Modern English. Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.

16. Foreign Literature in English. Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course lectures are given on Modern English Fiction.

17. Periods of English Literature. Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. Le Public et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut. Minor.

19. Shakspeare. Fünf Vorlesungen von Bernhard ten Brink. Minor.

X. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

CHARLES CARPENTER FRIES, A.M., PROFESSOR OF RHETORIC.

BROMLEY SMITH, A.M., INSTRUCTOR IN ORATORY.

GEORGE WADE EARLE, A.M., INSTRUCTOR IN RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. Rhetoric and English Composition. Introductory Course. Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen. Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. English Composition. Themes, recitations, and consultations. Required of Sophomores.

(a) First term; five hours. Special attention to technical writing. Students in Engineering and in Biology.

(b) Second term; five hours. Students in the literary courses.

3. Argumentation. Briefs, forensics, and discussion of the principles that underlie argument. Third term; five hours. Open to students who have passed in 1 and 2.

4. (a) **English Composition.** Advanced Course. Third term; five hours. Open to Seniors and Juniors.

4. (b) **Technical Writing.** Advanced Course. Third term; five hours. Open to Seniors and Juniors.

5. **Theses.** Every member of the Junior and of the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement orations. The subjects of the theses are presented to the Professor of Rhetoric before October 22 and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in the development of prose style. Five hours. Open to Seniors and Juniors.

7. **Diction and Usage.** An historical approach to questions of usage and style. Five hours. Open to Seniors and Juniors.

8. **Teachers' Course.** The theory of Rhetoric and the teaching of English Composition. Five hours. Open to Seniors who have had 3, 6, and 7.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory,

aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. Public Speaking. Delivery of complete orations illustrating and applying the principles studied in the first and second terms. A prize is offered to the young man and one to the young woman of the Freshman Class who excel in the delivery of these orations. Required, third term.

SOPHOMORES.

4. Public Speaking. Close analysis and study of the details of public speaking; study of the various styles of delivery and of the different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. Public Speaking. Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second, term, one hour.

6. Public Speaking. Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. Public Address. The various forms of addressing the public are studied. Beginning with open letters and editorials; the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens in the above forms. Third term, five hours; Sophomores.

8. Practical Oratory. Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have

been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. Interpretative Reading. The use of the voice in bringing out the meaning of the best literature is obtained by practice in class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors.

JUNIORS.

10. Prize Contest. A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in composition and elocution as shown during the preceding terms of the college Course.

11. Prize and Honor Debate. During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. Oral Debates. Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. Honors in Debating. During the year an elective course in debating is offered to Seniors. The last debate is public.

14. Prize in Oratory. A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

XI. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,

PROFESSOR OF FRENCH.

LEO LAWRENCE ROCKWELL, A.M.,

INSTRUCTOR IN SPANISH AND GERMAN.

MARC LUTHER BALDWIN, A.M.,

INSTRUCTOR IN GERMAN.

PAUL G. STOLTZ, A.M.,

INSTRUCTOR IN ITALIAN.

A.—GERMAN.

1. Elementary Course. Grammar; German Prose; practice in writing German. Three terms.

2. **German Prose.** Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. **German Prose and Poetry.** Grammar; practice in writing German. Elective Course for those who have taken Course 2.

4. **Historical German Pose.** Practice in writing German. Elective Course for those who have taken Course 3.

5. **Modern German Novelists.** Practice in writing German. Elective Course for those who have taken Course 4.

6. **Schiller (a).** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

7. **Schiller (b).** Practice in writing German; lectures. Elective course for those who have taken Course 4.

8. **Goethe (a).** Practice in writing German; lectures. Elective Course for those who have taken Courses 5-7.

9. **Goethe (b).** Shorter Poems, *Dichtung und Wahrheit*, *Faust I*; lectures. Elective Course for those who have taken Course 8.

10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken Course 9.

11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with Course 8.

12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with Course 9.

13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with Course 10.

14. **Lotze.** *Grundzüge der Psychologie.* (Philosophy 3.)

15. **German Biological Science.** (Biology 21.)

16. **German Chemical Science.** (Chemistry 16.)

17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B.—FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.

2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken Course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken Course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken Course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken Course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken Course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken Course 6.

8. **Authors of the XVIII Century.** Practice in writing French. Lectures. Elective Course for those who have taken Course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective Course for those who have taken Course 8.

C.—SPANISH.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. Through the year, five hours.

2. **Spanish Prose.** Advanced Course. Translation, Composition, Conversation. Second year, five hours. The courses in Spanish 1, 2, and 3 are open to Freshmen, optional with German and French.

D.—ITALIAN.

Elementary Italian. Grammar, Conversation, Translation of easy prose. Through the year, five hours.

XII. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNÆUS DRUM, SC.M.,
PROFESSOR IN SURVEYING.

HARRY SCHEIDY EVERETT, A.M., SC.M.,
INSTRUCTOR IN MATHEMATICS.

STANLEY NEWTON HARRIS,
ASSISTANT IN SURVEYING.

THOMAS MAURICE ORCHARD,
FURMAN WATSON SHAW,
ASSISTANTS IN DRAWING.

BENJAMIN JAMES WILSON,
THEODORE CORTLANDT WILLIAMS,
GEORGE FREDERICK JAMMER,
ASSISTANTS IN SHOPWORK.

CLIFFORD COATES DECK,
VORIS BLAINE HALL,
ASSISTANTS IN PHYSICS.

1. **Solid Geometry.** The course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differentiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. **Trigonometry.** The course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. **Analytical Geometry.** The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The course is intended to give a clear conception of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. **Differential Calculus.** The course includes higher derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

7. **Integral Calculus.** The course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and applications to problems in Physics and Mechanics. Sophomore year, third term, five hours.

8. **Higher Analytics.** The Course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior Advanced Calculus is included in Course 8; first term, five hours.

9. **Differential Equations.** A course with mechanical applications. Senior year, first term, five hours. This course alternates with Course 8.

10. **Descriptive Astronomy.** The aim of the course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science courses, first and second terms, one hour.

11. **General Astronomy.** The subject is taught by text-book, with illustrations in the observatory. Freshman year. Third term, five hours.

12. **Practical Astronomy.** Students use the ten-inch telescope and three-inch transit of the observatory. Open to all who have completed Course 11. Third term, five hours.

13. **Geodetic Astronomy.** The course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic determination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites,

a course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

14. Teachers' Course. (a) History of Mathematics. (b) Arithmetic, its status at present in the schools and methods of teaching it. (c) Algebra, a study of its typical parts. (d) Geometry, its basis; methods; inventional geometry. (e) Trigonometry and its applications.

15. Plane and Topographical Surveying. Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text. Lectures, tests. Field practice in each position on corps using transit, Y, dumpy, and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

16. Geodetic Surveying. Minor course. Sophomore Civil Engineering, one hour throughout the year.

17. Railroad Surveying. Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary surveying for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixed grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

17a. A Course in Surveying specially adapted to their needs is offered as an elective to the Seniors in Chemical, Electrical, and Mechanical Engineering.

18. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

19. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

20. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses,

Sophomore year, second term, five hours, and Junior year, first term, five hours.

21-23. Courses in Drawing. Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical, or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

24. Architectural Design. The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

25-27. General Physics. (Three terms.) These courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory, supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) **Electricity and Magnetism.** Second term.

(3) **Acoustics and Optics.** Third term.

28-31. Advanced Physics. The course extends throughout the year and assumes that the student has completed Courses 25-27 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Laboratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

28. Electrical Measurements. In this course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

29. Heat. A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous flow calorimeter and the Rowland apparatus.

30. Light. The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly, and Lummer-Brodhun screens.

31. Spectrum Analysis. Recitation one hour, Laboratory eight hours per week.

Comparison, observation, and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and miners; spark and arc spectra of solids; sparks and flame

spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva Society, prisms of all types by the best makers, absorption cells, etc.

32. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

33. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

34-36. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

37. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications, and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

38. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurements of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

39. Water Supply and Sanitary Engineering. Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of streams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also

the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

40. Contracts. In this course are given the principles of Common Law as applied to contracts. Third term, Senior Engineering, one hour.

41. Theoretical Mechanics. Differential and integral calculus are required for admission to this course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of machinery, work, energy, friction, and impact. Juniors, first term, five hours.

42. Direct Current Machinery. This course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurements of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

43. Alternating Current Generators, Transformers, and Motors. Electromotive force and current curves are traced, and their modifications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation, and general performance of alternating current apparatus are studied in detail. This course must be preceded by the course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

44. Design of Electrical Machinery. During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lectures, computing exercises, drawing, and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

45. Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries. Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of sec-

ondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

46. Telegraph, Telephone, Railway Signal, and Related Apparatus. Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, electrical Engineering, second term, five hours.

47. Electric Lighting, Construction, Wiring, and Economics. The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

48. Electric Railways, Construction, Operation, and Economics. This course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking, and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

49. Machine Design, Machine Tools. Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations, and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

50. Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors. This is a general course dealing with the thermodynamics of the heat engine, the theoretical, indicated, and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proximate and ultimate analyses. A large number of problems relating to steam engines, boilers, and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, all Engineering Courses, third term, five hours.

51, 52, 53. Steam Engineering. Senior year, Mechanical Engineering, five hours, through the year.

51. Steam Engines and Turbines. In this course the different types of steam engines and turbines are carefully studied, going more

into detail than in Course 50, special attention being given to the moving parts such as valves, valve-gear, etc. Also the various economizing appliances and their effect upon the cost of producing power are taken up. The classroom work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

52. Boilers. A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors, and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

53. Steam Engine Design. This course follows very closely Course 51, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the classroom each student is required to design and draw the parts for a steam engine of given size. Third term.

54-56. Shopwork. In Mechanical Engineering, shopwork is required of students throughout the four years of the course. In Civil, Electrical, and Chemical Engineering, it is required throughout four terms. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four courses are given, each extending through a year.

54. Wood-working. The course in wood-working consists of carpentry, cabinet work, and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

55. Pattern-making and Moulding. A general course covering pattern-making, simple moulding, and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes, and electric motors are made and assembled during the course. Sophomore year, all Engineering Courses, four hours.

56. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history, and design being discussed. Each student is required to design the parts, make the patterns, and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

57. Steam Engine. The work in this course is similar to that in Course 55, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

58. Internal Combustion Engines. A lecture course supplemented by reading and problems. It starts with the general theory of the internal combustion engine, expanding into a detailed study of the actual machine as manufactured and used. Special attention is given to the different types of engines, methods of introducing the working fluid, and the various systems of ignition, the automobile engine receiving a major portion of the time. Senior year, fall term, four hours.

59. Heating and Ventilation. In this course a general study of the various systems of heating buildings is taken up. Attention is given to the comparative merits, under differing circumstances, of the different systems, such as hot air, steam, hot water; direct and indirect heating; ventilation by fan and by natural air currents, special emphasis being given to installing details such as piping systems, location of drips, air valves, etc., together with computation of costs and efficiencies. The lectures are accompanied with problems and experiments. Senior year, winter term, four hours.

60. Refrigeration. This course consists of a series of lectures accompanied by illustrative problems bearing upon the various principles and systems of refrigeration. A study is made of the properties and action of ammonia as applied to refrigeration plants. The ice plant is studied in detail and cold storage construction is considered. The subject is taken up from the point of view both of operation and economics. Senior year, Mechanical Engineering, four hours.

XIII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
INSTRUCTOR IN CHEMISTRY.

MARK REUBEN EVERETT,
FRANKLIN DELAVERGNE JONES,
ASSISTANTS.

The courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigations and to train the

student in the various methods of chemical research. The courses as a whole are offered to those who expect to teach chemistry or enter the testing or industrial laboratory. As chemistry is at the foundation of the natural sciences, the first courses are essential to the study of science and medicine, and are important for general culture.

1. Descriptive Chemistry. Text-books, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4, 5, 6. Quantitative Analysis. This course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy, and water are studied.

(3) In the third term, Fire, Gas, and Electro-chemical methods are practiced.

7, 8, 9. Organic Chemistry. Prerequisites, courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Cairus' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later; polycyclic and heterocyclic compounds;

terpens and camphors are taken up. In the laboratory, preparations of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) Organic Preparations. Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) Organic Preparations. A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas law, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermodynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) Third term. Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity, migration of iron, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. **Chemical Preparations.** Prerequisites, Courses 1, 2, and 3. Laboratory course; ten hours per week.

(1) First term. Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) Second term. Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Re-

lations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. Industrial Chemistry. A series of lectures and recitations upon the most important technical chemical operations exclusive of metallurgy. A study of the application of chemical principles, technical processes, and the mechanical method of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, Courses 1, 2, and 3.

17. Metallurgy. The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, Courses 1, 2, and 3.

18. Agricultural Chemistry. The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, Courses 1, 2, and 3.

19. German Chemical Literature. One hour a week, throughout the year. Prerequisites, at least two terms of German, and Courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are read, and study is made of the derivation and formation of scientific words.

20. Physical Chemistry. Mathematical topics.

21. Organic Research.

22. History of Chemistry.

XIV. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR.

NORMAN HAMILTON STEWART, A.B., SC.M.,
PROFESSOR OF BIOLOGY.

ANNA ROBERTA CAREY, SC.B., A.M.,
INSTRUCTOR IN PHYSIOLOGY AND HYGIENE, DOMESTIC SCIENCE
COURSES.

CHESTER SCOTT KEEFER,
HENRY MEYER WEBER,
JOSEPH STANFORD LEPLEY,
ASSISTANTS IN BIOLOGY.

It is the constant aim in this department to teach how to inter-

pret nature. The student is guided in his investigations by lectures and laboratory manuals.

1a. **Human Physiology.** The aim of this course is to acquaint the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The course is intended for those who wish a general knowledge of Physiology.

1b. **Human Physiology.** General Physiology, Personal Hygiene, Home Nursing and Emergencies, Dietetics and Domestic Sanitation. Three terms, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors.

3. **Comparative Psychology.** Text-book, reports. Elective to Seniors and Juniors.

4. **Sanitary Science.** Lectures, one hour a week through the year.

5. **Human Osteology and Comparative Anatomy.** Recitations and dissections. In this course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. **Human Anatomy.** Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second course, similar to 6a.

7. **Normal Histology (a).** Recitations and lectures, and laboratory work. In this course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining, and sectioning.

8. **Normal Histology (b).** A continuation of Course 7.

9. **Embryology.** Recitations, lectures, and laboratory work. This course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds, and mammals.

10. **Biology.** Recitations and dissections. The aim of this course is to meet the needs of general education in this subject, and at the same time makes clear the fundamental principles, scope,

method, history, and subdivisions of Biology and its relations to other sciences.

11. Invertebrate Zoölogy. Recitations and dissections. This course succeeds the Course in Biology. It takes up the study and dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. Vertebrate Zoölogy. Recitations and dissections. This is a continuation of Course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. Philosophy of Zoölogy. Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. Entomology. Recitations and laboratory work. In this course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. Heredity. Minor course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. Phænogamic Botany. Recitations, lectures, and field work. This is a general course including the anatomy of the representative types and their relation to the environment; a study is made of the local flora.

17. Cryptogamic Botany. Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. Advanced Botany.

19. Elements of Forestry. A course covering the factors that control and regulate the development of forests.

20. Bacteriology. Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

21. Mineralogy and Geology. Recitations, lectures, and laboratory work. A general course intended to give the leading facts and

principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

22. **Economic Geology.** Recitations, lectures, and laboratory work.

23. **Historical Geology.**

24. **German Biological Literature.** Junior year, one hour throughout the year.

MEDICAL PREPARATORY STUDIES.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on the work in the Organic Sciences. A large room has been fitted up especially for Microscopic work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of reference, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeleton, a life-sized French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

G. NORMAN WILKINSON, SC.B., TAXIDERMIST.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia Medica. Parts of these collections are kept in the laboratories and used in classroom work.

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystallized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian antiquities. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library, ninety feet long, has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

MARGARET GEISSENHAINER MATTERN, AND HARRY CLARENCE FRIES,
ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon

and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in classroom work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

The sum of twenty-five thousand dollars has been received as a legacy from William H. Backus, M.D., Class of 1853, the income from which is to be used in the purchase of books.

The Carnegie Building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve one year or until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University, under seal, that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

EXHIBITING CLUBS.

Public exhibitions in Music, Oratory, or Athletics are under the control respectively of the Director of the School of Music, of the heads of the departments of Oratory, and of the Comptroller of Athletics. No other exhibitions or concerts are authorized. Alumni and friends should always communicate with the proper authorities before making engagements.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average standing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below 8.5; or if in his Senior year it is below 9. The passing grade for

graduate students is 9. No one will be recommended for graduation in the Courses of Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon the studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire course are graduated *summa cum laude*; students who attain an average of 9.2 or more graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall.

Attendance upon public worship in some church in town on Sunday morning is required.

GOVERNMENT.

It is assumed that all who enter the courses of study in the College do so for the purpose of acquiring an education, not only of

the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The college does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in her office College women who may desire advice or assistance from her.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting, missionary, and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknellian*. This periodical appears weekly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar

bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or classroom work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. This is now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

PHYSICAL CULTURE—WOMEN'S COLLEGE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Calisthenium of the Women's College is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

Two hours a week in the Calisthenium during the winter term is required for all resident students, Juniors and Seniors of college excepted. No student will be excused from the required exercise except by order of the Director of Gymnastics. Special exercises are prescribed for students needing individual corrective work.

Every student while exercising in the Calisthenium must wear a gymnasium suit of the pattern prescribed by the Director.

Swedish gymnastics, æsthetic gymnastics, light apparatus drill, playground work and games are taught. Lectures on health and hygiene are given throughout the year.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics.

The prize for 1917 was awarded to John Alfred O'Neal.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1917 was awarded to Frank Welton Ingram.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1917 was awarded to Alden Eugene Davis.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation are open for competition to the Sophomore and Freshman Classes. The prize for the Freshman Class was awarded, in 1917, to Evelyn G. Powell.

The prize for the Sophomore Class was not awarded.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1917 to Walter Clarence Beaver.

The corresponding prize for women was awarded in 1917 to Dorothy Beatty Kanter.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1917 to Ralph Bernheisel Beard, first, and Walter Clarence Beaver, second.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The first prize was awarded in 1917 to Alfred Allyn Earle, and the second to Olive Ewing Moore.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A. M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The prize for excellence in Latin was awarded in 1917 to Walter Clarence Beaver. The prize for excellence in Greek was awarded in 1917 to Raleigh Milton Felton.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A.M., Chaplain in the United States Navy, and a graduate from the Theological Department of this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1917 to Alfred Allyn Earle.

THE BUCKNELL PRIZES FOR WOMEN.

The following prizes for women were founded by William Bucknell, of Philadelphia.

1. A Senior Prize to be awarded to the member of the graduating class of the College, who shall attain the highest grade in the studies of the four years' College Course.

Awarded in 1917 to Olive Ewing Moore.

2. A Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

Awarded in 1917 to Helen Elizabeth Krouse.

3. A Junior Prize, to be awarded to the member of the Junior Class, who, being excellent in scholarship during the Junior Year, shall prepare the best essay.

The prize in 1917 divided between Dorothy Inez McClintic and Ora Beatrice Smith.

4. A Sophomore Prize, to be awarded to the member of the Sophomore Class who, being excellent in scholarship during the year, shall prepare the best Sophomore essay.

Awarded in 1917 to Alice Carey Ferris.

5. A Freshman Prize, to be awarded to the member of the Freshman Class who, being excellent in scholarship during the year, shall prepare the best Freshman essay.

Awarded in 1917 to Lucelia Beryl Childs.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from works which will be announced by the Professor of Rhetoric each year.

SCHOLARSHIPS.

I. BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A.M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A.B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIPS.

Were established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnae Club, is available for a woman student from Philadelphia.

X. THE WEAVER SCHOLARSHIPS.

Established with a fund of \$10,000, the gift of Colonel Joseph Kerr Weaver, A.M., M.D., Class of 1861, Trustee since 1891, and available for four worthy students. Named by action of the Board in honor of Doctor and Mrs. Joseph K. Weaver.

XI. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy students.

XII. THE ESTHER OWENS SCHOLARSHIPS.

Have been founded by a gift from Miss Esther Owens.

XIII. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnae and friends. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able. This fund is controlled by an Executive Board, who hold their annual meeting the second Tuesday in January.

During the last twenty-eight years eighty-six young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of Officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association.

Applications for loans should be made at or before the semi-annual meeting of the Board the second Tuesday in October.

Contributions should be sent to the Treasurer, Mrs. John T. Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katherine B. Larison, Lewisburg, Pa., or Mrs. Llewellyn Phillips, Corresponding Secretary, Lewisburg, Pa.

FOURTH STUDY.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take a fourth study in the College.

2. If the student shall attain an aggregate average of 9 in all the studies of the current term, and pass a satisfactory examination on the fourth study, it shall be credited to him.

EXPENSES.

The College charges amount to \$160 per annum, for those who room in the College buildings, and \$150 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as Tuition. Scholarships are rated at \$50 per annum, and that amount is deducted from College charges. Students in the Course in Civil, Electrical, or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged at same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$15 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damages to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms, according to the number of lights used.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board.

Young women in the Collegiate Department room and board in the Women's College.

EXPENSES OF STUDENTS IN WOMEN'S COLLEGE.

I. Boarding Students. The regular charge for Boarding Students in College Courses and Domestic Science Course, is \$350.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

This does not include the personal laundry of the student.

For the rooms in the Bucknell Cottage and in the New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students in College Courses and in Domestic Science Course is \$150.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing, and Painting, and Music, will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence on account of sickness.

The expenses for Music, Printing, and other charges ordinarily incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$10.00.

Free scholarships, rated at \$50.00 per annum, are awarded to children of Ministers of the Gospel *in actual service*.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$10 per term is charged for gas, water, and general chemicals for each course, except Courses 1 and 2, for which the charge is \$3. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men students can board in clubs at a cost of from \$2.50 to \$3 per week. Boarding can be obtained in private families at \$4 or \$5 per week, or at the table of the Bucknell Academy at \$4 per week. No self-boarding is allowed in the College buildings.

SUMMER SESSION.

NELSON FITHIAN DAVIS, SC.D.,

DEAN OF THE SUMMER SCHOOL.

The summer courses offered at Bucknell University for 1918 will begin Monday, July 1, and continue for six weeks. No sessions will be held on Saturdays.

The summer courses are primarily designed for the following classes of students:

1. Teachers in the public schools who desire advanced instruction and opportunities for research with or without regard to a degree or professional advancement.

2. Students who desire to secure additional residence courses in university work.

CREDIT FOR SUMMER COURSES.

All courses will be given hour for hour credit as satisfying the requirements for a degree. All courses offered are of college grade.

ADMISSION REQUIREMENTS.

No examinations are required for admission to the summer courses. Courses are open to men and women who are qualified to pursue them to advantage, but persons who desire credit toward a degree must satisfy the entrance requirements of Bucknell University before the work may be so credited. A permanent record will be kept of all work satisfactorily completed in the summer session.

BOARD AND LODGING.

Board and lodging may be obtained near the college at reasonable rates. Classes will be so arranged that students living in all nearby towns can attend and live at home. Arrangements will be made whereby furnished rooms in the college buildings can be had provided there is demand.

REGISTRATION.

All persons who intend to take summer courses are requested to send their application to Walter S. Wilcox, the Registrar of the University, if possible, before June 1, 1918.

FEES.

The tuition for three courses, \$25. Double time courses are counted the same as two single courses.

One course, \$10; two courses, \$20; four courses, \$31.25. Students will not be allowed to take more than four courses. All bills must be paid by July 6. No credit will be extended after that date. Information regarding laboratory fees is included in the detailed announcements of the courses in science.

The college makes no reduction for late entrance or for withdrawal before the close of the session; except that a proportional part of the fee is returned to a student who is compelled, through illness or other serious cause, to discontinue his course before the middle of the session.

LIBRARY AND MUSEUMS.

The Carnegie Library and the Museums of the University will be open for the use of the summer students without charge.

DESCRIPTION OF COURSES.

For detailed description of the Courses offered, reference is made to the Special Bulletin, copies of which may be obtained by applying to the Registrar, Walter Samuel Wilcox, Sc.M.

The Courses will include School Administration, History of Education, Child Psychology, Methods of Teaching English, Teachers' Biology, History (Economic and Political) of the United States; Courses in the Latin, French, and Spanish Languages; in English Literature; in Rhetoric and Oratory; in Algebra and Trigonometry; in Chemistry and in Biology.

WALTER SAMUEL WILCOX, REGISTRAR,
Lewisburg, Pa.

SIXTY-SEVENTH ANNUAL COMMENCEMENT

WEDNESDAY, JUNE 20, 1917.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

GEORGE BARNHART,	OLIVE EWING MOORE,
ALFRED ALLYN EARLE,	CHARLES WILBUR POTTER,
FELIX VALOIS MIKOLAJCZAK,	CLINTON IRWIN SPROUT,
JOSEPH CHARLES WEIRICK.	

ORATIONS MAGNA CUM LAUDE.

MEREDITH LUFFBARY ABBOTT,	SARA ALICE HASLAM,
RUTH PAULINE BARTHOLD,	DANIEL WEBSTER KEARNEY,
WALTER CLARENCE BEAVER,	EDWARD ANDREW KITLOWSKI,
FRANCIS JOSEPH BECKLEY,	HELEN ELIZABETH KROUSE,
GEORGE THOMAS BENDER,	HENRY TUTTLE LOFFT,
PAUL WHEELER BOGGESE,	LORA ELLEN MCQUAY,
MARY MAGDALENE BUBB,	JEANNETTE CAROLYN OWENS,
MAURICE HOWARD CRYDER,	GEORGE GRANTHAM PAINTER,
ARTHUR GILROY DEWALD,	KATHRYN ELIZABETH REDELIN,
RALEIGH MILTON FELTON,	HERMAN FREDERICK REICH,
ANNA ELLIS HANKINS,	FRANK EDWARD STETLER,
LILLIAN HELEN HANNOLD,	MARIE VOLKMAR,
FRANK SLAYMAN HARTMAN,	AMANDA LAURA WHITAKER,
HARRY GILBERT WILLSON.	

ORATIONS CUM LAUDE.

MILES DOMER ACKERMAN,	ANNA EMELINE DOWNING,
HAROLD AMOS BEERS,	LEWIS ARTHUR EYSTER,
ARNOLD LEIGH BENTON,	CARL DALIUS FELTON,
EUGENE PETER BERTIN,	ALBERT WAYNE HATFIELD,
HELEN CHRISTINA BROWN,	HENRIETTA HEINSLING,
CHARLES BUTCHINSKI,	EDITH MCCLONG HORTON,
KATHERINE CLAYTON,	HOLMAN GEORGE KNOUSE,
MARGARET MURRAY COLLINS,	ARIAL KROMER,
RALPH BECKER DERR,	ELIZABETH BOYD LEHR,

SARA ASENATH PARK,
 GROVER CLEVELAND POUST,
 FORREST GLENN ROGERS,
 RUSSELL M. SHEARER,
 DON BENITO SHIPMAN,
 FRANCES H. SILBERSTEIN,

CHARLES AUSTIN SOARS,
 CLARA RAY SPEARE,
 RAYMOND EYLER SPRENKLE,
 EBER NELSON SWOPE,
 ETHEL VIOLA WARD,
 FRANK E. WILLIAMS.

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 20, 1917.

A. DEGREES IN ARTS.

I. MASTER OF ARTS.

DARIUS A. BLOSE,
 PERRY AQUILA CARIS,
 FRANKLIN GARFIELD DAVIS,
 JASPER C. FRANTZ,

HARRY ELMER GRESS,
 DALE DAVIS HOLLENBAUGH,
 FRANK HALFPENNY PAINTER,
 VERNON NELSON ROBBINS.

II. BACHELOR OF ARTS.

RUTH PAULINE BARTHOLD,
 LOUISE ANTOINETTE BASSELL,
 WALTER CLARENCE BEAVER,
 FRANCIS JOSEPH BECKLEY,
 GEORGE THOMAS BENDER,
 EUGENE PETER BERTIN,
 MARY MAGDALENE BUBB,
 BERTHA CASTER,
 VERA QUINDARE COUCH,
 ANNA EMELINE DOWNING,
 LEWIS ARTHUR EYSTER,
 RALEIGH MILTON FELTON,
 NELLYLOU GARDNER,
 ANNA ELLIS HANKINS,
 LILLIAN HELENA HANNOLD,
 FRANK SLAYMAN HARTMAN,

SARA ALICE HASLAM,
 MARY ELIZABETH HUMPHREYS,
 ALICE SUSANNAH JOHNSON,
 AILEEN AUDREY JOHNSTON,
 HOLMAN GEORGE KNOUSE,
 ARIAL KROMER,
 HELEN ELIZABETH KROUSE,
 LORA ELLEN MOQUAY,
 FELIX VALOIS MIKOLAJCZAK,
 OLIVE EWING MOORE,
 EDNA ADETA OVERFIELD,
 GEORGE GRANTHAM PAINTER,
 HERMAN FREDERICK REICH,
 CLINTON IRWIN SPROUT,
 MARIE VOLKMAR,
 ETHEL VIOLA WARD,

HARRY GILBERT WILLSON.

III. BACHELOR OF PHILOSOPHY.

MARGARET MURRAY COLLINS,
 ARTHUR GILROY DEWALD,
 ALFRED ALLYN EARLE,

GUY PAYNE,
 STERLING THOMAS POST,
 HUGH THOMPSON RUSSELL,

CLARENCE REUBEN WEBER.

B. DEGREES IN SCIENCE.

I. THE SECOND DEGREE IN GENERAL SCIENCE.

GEORGE BARNHART,	KATHALYN VOORHIS,
	EARL SCHNEIDER TEED.

II. THE FIRST DEGREE IN GENERAL SCIENCE.

MEREDITH LUFFBARY ABBOTT,	DANIEL WEBSTER KEARNEY,
MILES DOMER ACKERMAN,	ELIZABETH BOYD LEHR,
WILLIAM ROY BAKER,	DAVID LANDERS MINK,
PAUL WHEELER BOGGESE,	SARA ASENATH PARK,
FRED CHARLES BRENNER,	CHARLES WILBUR POTTER,
HELEN CHRISTINA BROWN,	KATHRYN ELIZABETH REDELIN,
GEORGE BECHT CHAMPION,	MARY ELIZABETH REESE,
KATHERINE CLAYTON,	FORREST GLENN ROGERS,
JEANETTE COOK,	SAMUEL LEROY SEEMANN,
WILLIAM HARVEY CRAIGHEAD,	FRANCES H. SILBERSTEIN,
CHAS. HENRY WASHINGTON FISHER,	SARA EVANS THOMPSON,
HENRIETTA HEINSLING,	JOSEPH CHARLES WEIRICK,
EDITH MCCLONG HORTON,	YEURITH LEVINIA WESTBAY,
	AMANDA LAURA WHITAKER.

III. THE FIRST DEGREE IN BIOLOGICAL SCIENCE.

JOHN ATHERTON HEBERLING,	JEANNETTE CAROLYN OWENS,
EDWARD ANDREW KITLOWSKI,	IRWIN POTTER SOWERS,
	CLARA RAY SPEARE.

IV. THE FIRST DEGREE IN CHEMICAL ENGINEERING.

GEORGE BARNHART,	HAROLD SAMUEL HOPLER,
LEROY PIERRE CALKIN,	EARL STEWARD PEDIGO,
MAURICE HOWARD CRYDER,	CHARLES AUSTIN SOARS,
RALPH BECKER DERR,	EARLE BAXTER WEST,
BRUCE DALLAS GALBRAITH,	ARTHUR ROLLAND YON.

V. THE FIRST DEGREE IN CIVIL ENGINEERING.

JOSEPH JAMES DIRZULAITIS,	DELETH EBER MELLINGER,
DONALD ROSS DUNKLE,	REGINALD SPOFFORD NEWBURY,
CARL DALIUS FELTON,	DON BENITO SHIPMAN,
HOWARD CRISTOPHER FISHER,	HARLEY NEVIN SHIPMAN,
HENRY TUTTLE LOFFT,	EBER NELSON SWOPE,
ROYDEN STROVEL MATLACK,	FRANK E. WILLIAMS.

VI. THE DEGREE OF CIVIL ENGINEER.

CLARENCE BARNABAS CARVER.

VII. THE FIRST DEGREE IN ELECTRICAL ENGINEERING.

HAROLD AMOS BEERS,	JAMES ROBERT MCCORMICK,
ARNOLD LEIGH BENTON,	ST. CLAIR MURRAY,
CHARLES BUTCHINSKI,	GROVER CLEVELAND POUST,
CHARLES CLIFFORD GILLETTE,	RUSSELL M. SHEARER,
DONALD ALBERT HAMAN,	WARNER SPURGEON SQUIBB,
ALBERT WAYNE HATFIELD,	FRANK EDWARD STETLER,
DONALD DAVID HAYES,	RICHARD EVELEIGH THOMAS.

VIII. THE FIRST DEGREE IN MECHANICAL ENGINEERING.

FRED ELKANAH BENEDICT,	CHARLES CLEMENTS KEPPLE,
PETER PAUL BRANTLEY,	CLARENCE MCCLAY KRINER,
JAMES ARLING CASE,	HOWARD CHESTER LIEBENSBERGER,
EARL LEROY GRACE,	CHARLES DAVID MAURER,
CHARLES JOSEPH HAY,	RAYMOND EYLER SPRENKLE.

DEGREES CONFERRED *HONORIS CAUSA*.

MASTER OF ARTS.

ELI S. REINHOLD.

DOCTOR OF PEDAGOGY.

CHARLES DISON KOCH.

DOCTOR OF DIVINITY.

ARTHUR EMERSON HARRIS,	FRANK JOSEPH RAWLINSON.
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CERTIFICATES IN DOMESTIC SCIENCE.

MARTHA ESTHER ACHENBACH,	HAYDEE ELINOR FRANCIS,
GRACE ELEANOR AMES,	MARY EDNA GROVE,
MIRIAM NEFF BRIDGE,	FRANCES MAY HILGERT,
FLORENCE MAY DERSHEIMER,	KATHERINE BISHOP HOFF,
HILDA ELIZABETH DINTERMAN,	JULIA SOPHIA KARMILOWICZ,
ESTHER CAVIN EDGE,	ELIZABETH MOUNCE KATES,
MABELLE ALICE EEDE,	NAOMI B. LANE,
ETHEL MARY FELTON,	GLADYS RUTH MORGAN,
GAIL MYRA FELTON,	THELORA THELMA SMITH,
	HAZEL WILLIAMSON.

COMMENCEMENT ADDRESSES

JUNE, 1917.

Baccalaureate Sermon.....	THE PRESIDENT
Education Society, Sermon.....	REV. C. A. WALKER, A.M.
Address before the Alumni Association...	ANDREW R. E. WYANT, M.D.
Commencement Address.....	KATHERINE M. DAVIS, LL.D.

ALUMNI ASSOCIATION

The General Alumni Association.

President, OLIVER J. DECKER, A.B., Williamsport.

Secretary, EVELINE STANTON GUNDY, PH.M., Lewisburg.

The Alumni Club of Philadelphia.

President, GEORGE A. JENNINGS, M.D., Burlington, N. J.

Secretary, LOUIS W. ROBEY, A.M., ESQ., Philadelphia.

The Alumni Club of New York City.

President, T. A. K. GESSLER, D.D., New York City.

Secretary, ANDREW GREGG LOOMIS, A.B., LL.B., New York City.

The Alumni Club of Pittsburgh.

President, GEORGE W. ENGLISH, A.B., Pittsburgh.

Secretary, FREDERICK R. ZUG, SC.B., Carnegie.

The Alumni Club of Chicago.

President, A. R. E. WYANT, PH.D., Chicago.

Secretary, JOSEPH C. HAZEN, PH.D., Chicago.

The Alumni Club of Northeastern Pennsylvania.

President, WILLARD MAINE BUNNELL, A.B., ESQ., Scranton.

Secretary, JOHN DAVIS, A.M., Nanticoke.

The Alumni Club of Harrisburg.

President, JOHN C. NISSLEY, A.M., ESQ., Harrisburg.

Secretary, JOHN T. SHIRLEY, Harrisburg.

The Alumni Club of Washington City.*President*, HENRY H. BLISS, A.M., ESQ., Washington, D. C.*Secretary*, JOHN C. HOSTETTER, SC.M., Washington, D. C.**The Alumni Club of Central Pennsylvania.***President*, JUDGE THOMAS J. BALDRIDGE, Hollidaysburg.*Secretary*, S. F. FORGEUS, D.D., Huntingdon.**The Alumni Club of Williamsport.***President*, OLIVER J. DECKER, A.B., Williamsport.*Secretary*, GERTRUDE W. ROOS, SC.B., Williamsport.**The Alumni Club of Lewisburg.***President*, LEROY T. BUTLER, A.B., Lewisburg.*Secretary*, LEO L. ROCKWELL, A.M., Lewisburg.**The Alumni Club of Sunbury.***President*, GEORGE EDWARD DEPPEN, A.B., ESQ.*Secretary*, CULLEN FRAZER SHIPMAN, A.B., ESQ.**The Alumni Club of California.***President*, ALLAN G. RITTER, A.M., Los Angeles.*Secretary*, ROY J. FARR, A.B., Los Angeles.**The Alumni Club of China.***President*, CHARLES WAY HARVEY, A.B., Shanghai.*Secretary*, REV. LEWIS C. HYLBERT, A.B., Ningpo.**General Alumnæ Association.***President*, MARGARET FOCHT McCCLURE, Lewisburg.*Secretary*, WILHELMINA DARLINGTON BUTLER, Lewisburg.**Philadelphia Alumnæ Club.***President*, HANNAH GOODMAN, A.M.*Secretary*, OLIVE CROZER RICHARDS, A.B.**Lewisburg Alumnæ Club.***President*, KATE McLAUGHLIN BOURNE, Lewisburg.*Secretary*, FANNIE MAE GETZ, Lewisburg.

Number of Alumni, 2094.

Number Living, 1819.

Oldest Living Graduate,

REV. JOHN MORRIS LYONS, Class of 1851.

NAMES OF STUDENTS

GRADUATE STUDENTS

NAME.	MAJOR SUBJECT.	RESIDENCE.
JOHN RANCK BELL, PH.B.,	<i>Philosophy.</i>	Lewisburg
DANIEL FLOYD K. BERTOLETTE, A.B.,	<i>Literature.</i>	Shamrock
JOHN BENJAMIN BOYER, SC.B.,	<i>Science.</i>	Milroy
MABEL MAY BROWN, A.B.,	<i>English.</i>	Clearfield
WILLIAM ADAM CAWLEY, SC.B.,	<i>Biology.</i>	Lewisburg
RAYMOND E. CROSS, SC.B.,	<i>Economics.</i>	Middletown, N. Y.
JOSEPH LESLIE CROWELL, A.B.,	<i>Philosophy.</i>	Barnegat, N. J.
RALPH FREDERICK DAVENPORT, PH.B.,	<i>Pedagogy.</i>	Carlisle
ISAAC NEWTON EARLE, JR., A.B.,	<i>Greek.</i>	Lewisburg
FAYETTE CLINTON ESHELMAN, SC.B.,	<i>Biology.</i>	Franklin
WILLIAM HAYES GATEHOUSE, A.B.,	<i>History.</i>	Cumberland, Md.
WALTER SCOTT GEARHART, SC.B.,	<i>Civil Engineering.</i>	Manhattan, Kansas
MARWOOD BENJAMIN GLOVER, SC.B.,	<i>Jurisprudence.</i>	Collingdale
EUNICE VIRGINIA HALL, PH.B.,	<i>Education.</i>	Scranton
HORACE LEROY HALL, A.B.,	<i>Philosophy.</i>	Woodlawn
COLEMAN JOHN HARRIS, A.M.,	<i>Biology.</i>	Mont Alto

NAME.	MAJOR SUBJECT.	RESIDENCE.
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Newark, N. J.
HARRY XING KELLY, A.B.,	<i>Philology.</i>	Philadelphia
MARY ANNA KUNKEL, A.B.,	<i>Literature.</i>	Lewisburg
CHARLES WALTER LOTTE, A.B.,	<i>French.</i>	Paterson, N. J.
MINNIE ETHEL MAYNARD, A.B.,	<i>Pedagogy.</i>	Williamsport
GILBERT JUDSON MEREDITH, SC.B.,	<i>Science.</i>	Woodbridge, N. J.
NORMAN GOULD OLIVER, A.B.,	<i>Philosophy.</i>	Evansville, Wis.
RUDOLPH PETERSON, SC.B.,	<i>Education.</i>	Cresson
GEORGE WILSON POTTS, A.B.,	<i>Science.</i>	Pittsburgh
ALBERT NORMAN REDELIN, SC.B.,	<i>Biology.</i>	Philadelphia
JESSE EARLE RILEY, A.B.,	<i>Economics.</i>	Philippi, W. Va.
FRED VALENTINE ROCKEY, A.B.,	<i>History.</i>	Camp Hill
DAVIS CLIFFORD RUTH, A.B.,	<i>Latin.</i>	Philadelphia
CHARLES LOY SANDERS, A.B.,	<i>English.</i>	Germantown, Ohio
PAUL JASPER SANDERS, A.B.,	<i>Science.</i>	Summit, N. J.
GEORGE EDWARD SCHILLING, A.B.,	<i>Pedagogy.</i>	Franklin
ROBERT ROWE SELLERS, SC.B.,	<i>Civil Engineering.</i>	Gainesville, Fla.
JOSEPH PARDOE SHEARER, SC.B.,	<i>Biology.</i>	Baltimore, Md.
REUBEN WELTY SHRUM, SC.B.,	<i>Philosophy.</i>	Princeton, N. J.
GEORGE SALVADORE STEVENSON, SC.B.,	<i>Biology.</i>	Baltimore, Md.
CHESTER JOSEPH TERRILL, A.B.,	<i>Economics.</i>	Albany, N. Y.

NAME.	MAJOR SUBJECT.	RESIDENCE.
MARTHA JANE THOMAS, PH.B.,	<i>German.</i>	Frostburg, Md.
JESSE ROY TYSON, SC.B.,	<i>Civil Engineering.</i>	Norristown
ARTHUR DAVID WALTZ, SC.B.,	<i>Biology.</i>	Hepburnville
HARRY BRUNGART WEAVER, PH.B.,	<i>History.</i>	Meyersdale
PAUL RAYMOND WENDT, SC.B.,	<i>Economics.</i>	Philadelphia

Graduate Students, 42.

THE SENIOR CLASS.
CLASS OF 1918.

NAME.	RESIDENCE.
ALVIN JACOB ADAMS,	Bellaire, Ohio
HULDA HOUSTON ARTHUR,	Avon-by-the-Sea, N. J.
WILLIAM PALMER BACHMAN,	Sunbury
FRED BARNHART BAUMAN,	Danville
FRANK ALLEN BERKENSTOCK,	Mifflinville
MARY BARRICK BEATTY,	Lewisburg
JOHN EDGAR BENNETT,	Port Monmouth, N. J.
HIRAM JOHN BLOOM,	Sunbury
RUSSELL ALBERT BOSTIAN,	West Milton
DAVID NATHANIEL BOSWELL,	Lewisburg
MARY NINA BOSWELL,	Lewisburg
WALTER JACOB BOWER,	Herndon
RUSSELL ELIAS BOYER,	Sunbury
ELIZABETH BIRD CHAMPION,	Montoursville
MARGARET COATES,	Plymouth
CHARLES WALTER DEAN,	Williamsport
CLIFFORD COATES DECK,	Trenton, N. J.
ALFRED RAPHAEL DELAND,	Watertown, Conn.
MARY DEWEES,	Montrose
ALBERT WINSLOW ELLIOTT,	Fayette City
ETHEL RUTH FARLEY,	Mifflinburg
HENRY LAWRENCE FONDA,	Milton
GROVER CLEVELAND FORESMAN,	New Columbia
MABEL HAIN FRITZ,	West Reading
EDITH GABEL,	Richlandtown
HAZEL MARIE GAY,	Homer, N. Y.
JOHN STEINER GOLD,	Muncy
HERBERT CARL GRICE,	Seranton
ELIZABETH LOUISE HAHN,	Meshoppen
STANLEY NEWTON HARRIS,	Lewisburg
EMERSON ROY HASSRICK,	Muncy
ETHEL REBECCA HEWITT,	Mifflinburg
KARL KELCHNER HULLEY,	Philippi, W. Va.
NERISSA DAGMAR JAMES,	New York, N. Y.
WILLIAM THOMAS JOHNSON,	Sunbury
ELLA CORINNE JONES,	Montrose
JOHN MCKEE JONES,	Pittsburgh
DOROTHY BETTY KANTER,	Wilkes-Barre

NAME.	RESIDENCE.
CHESTER SCOTT KEEFER,	Altoona
CHARLES ANDREW KISSELL,	Lock Haven
AILEEN MARIE LARSON,	Kane
SAMUEL DAVID LENOX,	Trenton, N. J.
JOSEPH STANFORD LEPLEY,	Winfield
KATHERINE MARIE LERMANN,	Monessen
DAGMAR ELLEN LETH,	Trenton, N. J.
EMMA KATHERINE LEVEGOOD,	Jersey Shore
MARSH CHARLES LEWISSON,	Milton
CARLISLE WEAVER MASON,	South Williamsport
MARGARET GEISSENHAINER MATTERN,	Reading
MARGUERITE FRANCES MAY,	Johnsonburg
DOROTHY INEZ MCCLINTIC,	New York, N. Y.
EVELYN MCGANN,	Lewisburg
DOROTHEA FRANCES MEEK,	Allenwood
FLORINE MICHAEL,	Laceyville
GEORGE HOBART MILES,	Portage
MIRIAM AVIS MINCH,	Tyler Hill
ROBERT STORK MOORE,	Bluff Point, N. Y.
MALCOLM EUGENE MUSSER,	Lewisburg
BOYD LAWRENCE NEWCOMB,	Newport, N. J.
LEON HENRY NOLL,	Lewisburg
HENRY SHERMAN NORTHROP,	Monroeton
MARGARET BAINBRIDGE PHILLIPS,	Wilkes-Barre
JESSIE IRENE POTTS,	Greensburg
EVELYN EDWINA PUGH,	Oxford
BRUCE OLIVER RANCK,	New Columbia
EARL PRESTON RAUB,	Lewisburg
ALLEN SNADER REDDIG,	Adamstown
ELEANOR LOUISE ROBERTSON,	Knoxville, Ill.
HOWARD LANDIS ROSENBERGER,	Schwenksville
CHESTER FRANKLIN SCHROYER,	Loganton
HELEN LORAIN SHAFER,	Lewisburg
FLORENCE PAULINE SHALTER,	Reading
FRAZIER HERBERT SHEFFER,	Milroy
LOUIS WALTON SIPLEY,	Lewisburg
ORA BEATRICE SMITH,	White Deer
SAMUEL JACOB SMITH,	Tylersville
SAMUEL DALE SPOTTS,	Lewisburg
ELIZABETH WARD STEPHENS,	Lewisburg
WILLIAM EDMUNDSON TRIMBLE,	McKeesport
CHARLES CARROLL WARD,	Port Allegany

NAME.	RESIDENCE.
MIRIAM GRAYCE WEAVER,	Rebersburg
MARTHA EVELYN WETTLAUFER,	Williamsport
FRED NIEWEG WILLIAMSON,	Lincoln University

Seniors, 83.

MEMBERS OF THE CLASS OF 1918 IN MILITARY SERVICE.

NAME.	RESIDENCE.
CHARLES JOSEPH ANCHOR,	Philadelphia
EDWIN EWART AUBREY,	Kingston
BRUCE LEROY BANKS,	Atlantic City, N. J.
LEROY GLEASON CLARK,	Canton
HARVEY DALE CRAWFORD,	Brookville
ROBERT DONALDSON,	DuBois
ROBERT SAXTON DOWNING,	Milford
MARION MARMADUKE EARLE,	Lewisburg
LEWIS ABRAM EATON,	Harrisburg
REYNOLDS FRAMPTON ELLIOTT,	Clarion
THOMAS AUSTIN ESHELMAN,	Franklin
LLOYD LOY GARNER,	Harrisburg
HENRY ALLEN GITTLEMAN,	Reading
WILLIAM ROY HECKENDORN,	Duncannon
FRANCIS LUTHER COULSON HEIKES,	Dillsburg
LESTER ADAM HERB,	Snydertown
ERNEST WELLINGTON HEWITT,	Mifflinburg
EMIL WILLIAM HOLINGER,	Philadelphia
NORMAN KEEN HURLEY,	Salem, N. J.
CHARLES VERNON IREDELL,	Painted Post, N. Y.
MILLER ALANSON JOHNSON,	Lewisburg
EVERETT THOMAS JONES,	Scranton
DONALD WILLIAM KORTH,	New York, N. Y.
WALTER LARRISON LEES,	Leechburg
LESTER EUGENE LIGHTON,	Williamsport
HENRY THOMAS MARSHALL,	South Brownsville
JAMES STOUGHTON MATHERS,	Lewisburg
ROBERT MITCHELL NEAL,	Rio Grande, N. J.
ARTHUR ENOCH PAULHAMUS,	Cogan Station
SIDNEY JAMES PEALE,	Eagles Mere
CHARLES AFFLERBACH REED,	Mt. Ephraim, N. J.
FRANK HENRY RITTER,	Paterson, N. J.

NAME.	RESIDENCE.
JAMES EDWARD ROBBINS,	Lewisburg
PAUL SANDEL,	Lewisburg
JULIUS FREDERICK SEEBACH,	Hollidaysburg
DAVID CARLTON SHILLING,	Sharon
WALTER STANLEY SHOFFSTALL,	Kulpmont
VAN KIRK STANSBURY,	Carbondale
DANIEL RIDGWAY STEELE,	Newton, N. J.
EVERETT EVERSON STONE,	Carbondale
REXFORD ERVIN STONE,	Carbondale
NATHAN TEITELBAUM,	Northumberland
WILLIAM TORKINGTON,	Wellsboro
ROBERT CHARLES UMLAUF,	Muncy
HIRAM JACOB WAGNER,	Smithton
JAMES ROYALL WALDRON,	Englewood, N. J.
JOHN CLAYTON YON,	Atlantic City, N. J.

THE JUNIOR CLASS.
CLASS OF 1919.

NAME.	RESIDENCE.
SAMUEL ABRAMS,	Milton
GABRIEL LEROY ADAMS,	Herndon
MARGARET ELIZABETH ALLEN,	Allenwood
HARRY HERMAN ANGEL,	Williamsport
DEWITT KIEFFER BOTTS,	Milton
MARY EVELYN BRIGHT,	Philadelphia
MARGARET JANE BUCK,	Weldon
ROBERT GONZALES CARULLA,	Santiago, Cuba
HAZARD CLINTON CHASE,	Clearfield
GOLDA CLARK,	Jersey Shore
FLORENCE ADELAIDE CLEARY,	Dunmore
RAYMOND JOHN CORNISH,	Carbondale
ERNEST JUDSON CRUSE,	Picture Rocks
EMERSON COLLINS CUPP,	Milton
ALDEN EUGENE DAVIS,	Dickson City
MARY MARGUERITE DOWNER,	Glassboro, N. J.
RUTH EVELYN FARQUHAR,	West Brownsville
MERRILL FRANKLIN FEAIRHELLER,	Spring City
ALICE CAREY FERRIS,	Philadelphia
MARGARET MARY FINERTY,	Dunmore
JEAN OLGA FLANAGAN,	Pittsburgh
HARRY CLARENCE FRIES,	Mercersburg
IRENE JEMIMA FRITZ,	Trevorton
DAVID CHRISTIAN GALL, JR.,	Philadelphia
WILLIAM JOHN GEATING,	Ashland
WEBER LATCHA GERHART, JR.,	Lewisburg
AGNES McDOWELL GILMOUR,	Hawthorne, N. J.
IRENE ELSIE GOSSWEILER,	Allentown
MARY EDNA GROVE,	West Milton
SUSANNAH DUNKLE GROVE,	West Milton
META FRANCES HALDEMAN,	Ivyland
VORIS BLAINE HALL,	Montgomery
HOWARD JUDSON HANN,	Andover, N. Y.
HOWARD LAVERNE HARER,	Williamsport
MADONNA HARRIS,	Laceyville
PAUL ELMER HARTMAN,	Oley
JAMES RUSSELL HERMAN,	Edwardsville
IRMA LENORE HESS,	East Downingtown

NAME.	RESIDENCE.
HELEN ROBERTA HOFFA,	Lewisburg
CLIFFORD AMBROSE HOLLERAN,	Watertown, Conn.
WILLIAM FREDERICK HOLSING,	Canonsburg
JOSIAH LESTER HOUSER,	Milroy
MARION ELINOR HYATT,	York
GEORGE FREDERICK JAMMER,	Trenton, N. J.
FRANKLIN DELAVERGNE JONES,	Nanticoke
RAYMOND DEWITT KLINE,	Winfield
MAJORIE REBECCA KOSTENBADER,	Lewisburg
CHARLES BUNNELL KREITNER,	Honesdale
GEORGE MERRILL KUNKLE,	Lewisburg
NAOMI B. LANE,	Brockwayville
DOROTHY BEAUMONT LAWRENCE,	Butler, N. J.
CHESTER ROBERT LEABER,	Williamsport
ELVIRA BURLAND LEWIS,	St. Clair
RAYMOND PLANK LEWIS,	Lewisburg
JAMES WILLIAM LOWRY,	Uniondale
BARTON HIRST MACKEY,	Oxford
BENJAMIN MARKOWITZ,	Pottstown
MARGARET SALOME McLAUGHLIN,	West Newton
MARY MATILDA McLAUGHLIN,	West Newton
RUTH ADELIA MINNIG,	West Hazleton
CHARLES WILLIAM MITCHELL,	Reedsville
CHARLES BYRON MOORE,	Reynoldsville
NEWTON FRANKLIN NEWMAN,	Lewisburg
KENNETH WILSON OAKLEY,	Manasquan, N. J.
THOMAS MAURICE ORCHARD,	Carbondale
HOWARD READING PARS,	Williamsport
ELIZABETH McLEAN PATERSON,	Montgomery
HAYES LEROY PERSON,	Williamsport
JAMES KANE PETTITE,	New York, N. Y.
FRANK HEILMAN RIALE,	South Williamsport
MARION RIESS,	Mercedes, Texas
FRANK WESLEY RORABACH,	Lewisburg
KARL DAVID SMITH,	Catawissa
ERNEST FREDERICK SONDER,	South Williamsport
ELIZABETH FAIRCHILD SPYKER,	Lewisburg
GEORGE ALLEN STARKWEATHER,	Carbondale
RUTH STEIN,	Lewisburg
RUSSELL RAY STOUT,	Cedarville, W. Va.
CATHERINE GEHRETT THOMPSON,	Reedsville
RAYMOND DEILY TICE,	Quakertown

NAME.	RESIDENCE.
HELEN GLADYS VANDINE,	Hazleton
HENRY MEYER WEBER,	Mt. Ranier, Md.
CLYDE EARL RUSSELL WENRICH,	Sinking Spring
BENJAMIN JAMES WILSON,	West Pittston
RAYMOND A. WITCHEY,	Osceola Mills
CLYDE WILLIAM WITHINGTON,	Snydertown
EMMA IRENE YARNALL,	Lewisburg

Juniors, 87.

MEMBERS OF THE CLASS OF 1919 IN MILITARY SERVICE.

NAME.	RESIDENCE.
CHARLES MCKNIGHT BASHORE,	Mifflintown
GEORGE HAROLD BEATTIE,	Shippensburg
RICHARD THERON CARVOLTH,	Peckville
ALEXANDER HILL CHALFANT,	Brownsville
THOMAS COOPER COCKILL,	Pottsville
CLARENCE ANDERSON DAVIS,	Nanticoke
JOSEPH DAYKIN DENT,	Pittsburgh
HARVEY CARL DETWILER,	Norristown
FREDERICK EUGENE DUFFEE,	Franklin
CHARLES MALCOLM EMERICK,	Nittany
STEWART ALBRIGHT EPLER,	Reading
NORMAN TURNER FINGER,	Steelton
JOHN ROY GAENZLE,	Reading
ALBERT LESLIE GANDY,	Cape May Court House, N. J.
HAROLD NAPOLEON GILBERT,	Williamsport
KARL GEORGE GOERDEL,	Mifflinburg
THOMAS RUSSELL HEDGE,	Scenery Hill
KENNETH CARSWELL HEINRICH,	Brockport, N. Y.
JOHN CROWTHER HENDREN,	Philadelphia
EUGENE KALLAY,	Leechburg
DONALD SHEEDER LAHER,	Everett
THOMAS JAMES MANGAN,	Charleroi
DAVID JAMES MARTIN,	Scranton
RICHARD ARMSTRONG MASON,	Boise, Idaho
WILLIAM WALLACE MASTERTON,	Paterson, N. J.
FRANCIS PATRICK McDERMOTT,	Houtzdale
ARTHUR DAVID MCKINLEY,	Sharon
EMERSON VINCENT PECK,	Findley Lake, N. Y.

NAME.

RESIDENCE.

JAMES CRAVEN PIERCE,	Reading
HARRY EUGENE POTTS,	Greensburg
AELRED LEO QUINN,	Great Neck, L. I.
NELSON SAMUEL ROUNSLEY,	Millerstown
GURNEY CARL SEEBER,	Milford, N. Y.
HERMAN DEANE SHULTZ,	Moorestburg
HAROLD ANDREW STEWART,	Ashtabula, Ohio
HARRY VERNON THOMAS,	Greenville
WALTER SCOTT WHITE,	Honeybrook
LEONARD F. WORTHINGTON,	Eagles Mere

THE SOPHOMORE CLASS.
CLASS OF 1920.

NAME.	RESIDENCE.
ANTHONY DANIEL AMERISE,	Hazleton
JUDSON MYRON ASH,	West Pittston
HAROLD RAYMOND BAIR,	Vandergrift
WILLIAM WESTLEY BAIRD,	Reedsville
JOHN NEVIN BAUMAN,	Danville
ROBERT KINSLOE BELL,	Mt. Union
GEORGE NORMAN BENJAMIN,	Chester
ANNE ELY BERTOLET,	Oley
HOBART GEISSINGER BIEHN,	Quakertown
JAMES NIEMAN BIERLY,	Milton
DAWSON FLOYD BLOOM,	Sunbury
EDNA BEATRICE BLOOM,	Sunbury
WILLIAM JENNINGS BRYAN BLOOM,	Sunbury
HELEN ELIZABETH BODINE,	Jenkintown
JESSIE NAOMI BOOGAR,	Haddonfield, N. J.
LAMBERT TEUFEL BOTTS,	Milton
MARGARET IRENE BROWN,	Lewisburg
MERRILL WILSON BROWN,	Lewisburg
NELSON ELLSWORTH CHANCE,	Dividing Creek, N. J.
LUCELIA BERYL CHILDS,	Groton, N. Y.
VINCENT PAUL CONNELLY,	Branchdale
ELTHERA GLENN CORSON,	Bridgeton, N. J.
JAMES CAMPBELL CRAIG,	Philadelphia
CHLOE PEARL CROSLEY,	Hughesville
DAVID RAYMOND CROSSGROVE,	Lewisburg
ETHYLE DOUGLAS CULBERT,	Elizabeth
HERBERT SETLEY DELONG,	Watsontown
ERROL HUNT DERBY,	Scranton
MERRILL BROWN DEWIRE,	Lewisburg
STEPHEN FREDERICK DIMLICH,	Scranton
ELIZABETH RUTH DOWNS,	Williamsport
MARION ELLENBOGEN,	Danville
BEATRICE MARGARET ELWELL,	Bridgeton, N. J.
MARK REUBEN EVERETT,	Slatington
ROBERT BOYER FAUST,	Sunbury
BEATRICE MAY FETTERMAN,	Hazleton
LESTER PERHAM FOWLE,	Danville
HELEN ADELAIDE FOWLER,	Watsontown

NAME.	RESIDENCE.
JULIUS ORVILLE FRAKER,	Orbisonia
CHARLES RAYMOND FREEBLE,	Latrobe
FLORENCE MINERVA GABLE,	Lewisburg
EDITH AMANDA GARDNER,	Carbondale
GEORGE EWAN GASKILL,	Philadelphia
ALBERT GABRIEL GIBBS,	Nanticoke
MARY KATHERINE GLOVER,	Vicksburg
MARIAN KATHERINE GOHO,	Lewisburg
HERBERT CLAIR GREENLAND,	Pittston
ALICE GERTRUDE HACKETT,	Johnstown
JACK EMLIN HALL,	Harrisburg
HENRY URIAH HECKART,	Lewisburg
THOMAS JACOB SHAFER HEIM,	Williamsport
AGNES HOFFMAN,	Chadd's Ford
IRVIN VALENTINE HOLMES,	Mawr Glenn
MORRIS DANIEL HOOVEN,	Turtle Creek
LOUISA HOWELLS,	Carbondale
ROBERT LEON HULSIZER,	Milton
EVAN WILLIAM INGRAM,	Nanticoke
FRANK WELTON INGRAM,	Lewisburg
KATHERINE ELLEN JOHNSON,	Williamsport
LLEWELLYN JONES,	Plymouth
MABEL ERMA JONES,	Throop
RUTH ALIDA KELLOGG,	Dalton
BLANCHE MARGARET KENNELLEY,	Milton
KATHERYN REBECCA KEYLOR,	Cochranville
HENRY KITLOWSKI,	Nanticoke
JOSEPH MICHAEL KWIATEK,	Olyphant
ROBERT SIMINGTON KYLE,	Milton
HUSTON LINCOLN LACLAIR,	Uniontown
EDITH MARIE LARSON,	New Haven, Conn.
GEORGE WALTER LEES, JR.,	Camden, N. J.
WILLARD LEGRANDE LEWIS,	Thompson
CECILIA ABIHAIL LINCH,	Elmer, N. J.
VORIS ALBERT LINKER,	Williamsport
PEARL AILEEN LOTT,	West Pittston
JOHN RUSSELL LOWMAN,	Johnstown
GEORGE LOXLEY LOWRY,	Friendship, N. Y.
HENRY CLAY LUCAS,	Winfield
JOSEPH MICHAEL MAGGIO,	Ralston
JOHN ARLINGTON MASON,	Williamsport
ANDREW RUSSELL MATHIESON,	Munhall

NAME.	RESIDENCE.
MARY HELEN MATTHEWS,	Johnstown
CARL ADAM METZ,	Scranton
HAROLD EDWARD MILLER,	Lewisburg
GRACE DEVERE MILLWARD,	Lewisburg
ETHEL AUGUSTA MITCHELL,	Williamsport
HENRY LEWIS DAVIS MOORE,	Bridgeton, N. J.
WILLIAM HENRY MORRISON, JR.,	Philadelphia
HELEN LOUISA MOYLE,	Plymouth
FRANCES ADA MCFARLAND,	Watsontown
HARRY LEROY NANCARROW,	Jersey Shore
HELEN NUTT,	Dresden, N. Y.
ALBIN VICTOR OHLSON,	Kane
GLENN EDWIN OTT,	Orbisonia
ELIZABETH NARCISSA PATTERSON,	Kirkwood
FELIX PIEKARSKI,	Nanticoke
CLARENCE HENRY PONTIUS,	Sunbury
EVELYN GWENDOLYN POWELL,	Edwardsville
JOY TILLMAN PROSS,	Lewisburg
KATHERINE FLORENCE PUDDICOMBE,	New Haven, Conn.
WILBUR BARNER REAM,	Lewisburg
FRANCIS FESS REAMER,	Pittsburgh
HELEN REED,	New Brunswick, N. J.
HENRY CLAY REED,	Lock Haven
ELTON PHILLIPS RICHARDS,	Wilkes-Barre
WILLIAM JOHN ROLF,	Scranton
WALTER DRY ROOS,	Reading
MABEL ELIZABETH RUCKMAN,	Turbotville
DWIGHT WILLIAM RUDE,	Waymart
THADDEUS ANTHONY SALACZYNSKI,	Nanticoke
MARY PAULINE SCHENCK,	Morristown, N. J.
ANTHONY ALFONSE SCHWENKLER,	Mt. Carmel
FURMAN WATSON SHAW,	Haddonfield, N. J.
LA VERNE HARRY SHEA,	Williamsport
ABRAHAM LINCOLN SHERK,	Camden, N. J.
MARGARET SNOVER SIPLEY,	Lewisburg
KATHRYN SLIFER,	Milton
WARREN HENRY SLOCUM,	Reading
GEORGE ADDISON SMITH,	Flanders, N. J.
MARGARET THOMAS SMITH,	Lansford
ROBERT BRUCE SMITH,	Hughesville
ROY DIETRICH SNYDER,	Hazleton
WILLIAM EVERETT CLARK SPEARE,	Lewisburg

NAME.	RESIDENCE.
PAUL HENRY STOLZ,	Philadelphia
DOROTHY MARIE THOMPSON,	Woodlynne, N. J.
MARGARET HELEN TRUMP,	Derry
DOROTHY VILLINGER,	Williamsport
ROBERT NORMAN WADDELL,	Pittsburgh
KATHRYN LUETTA WAGNER,	Lewisburg
HARRY JOHN WAGONER,	Philadelphia
HELEN McCORMICK WALTON,	Williamsport
HARRY REDCAY WARFEL,	Reading
FRANKLIN AUGUST WEIGAND,	Philadelphia
GERTRUDE ESTELLA WERTS,	Pittston
CARRIE AMANDA WETZEL,	Beavertown
ADELIA LOVINIA WILKES,	Erie
THEODORE CORTLANDT WILLIAMS,	Vineland, N. J.

Sophomores, 136.

MEMBERS OF THE CLASS OF 1920 IN MILITARY SERVICE.

NAME.	RESIDENCE.
THOMAS WESLEY AGNEW,	Brookville
WARREN WOODWARD BRYSON,	Media
JOHN WESLEY CAMPBELL,	Mauch Chunk
LORIN DAVIDSON CUNNINGHAM,	Portsmouth, Ohio
WILLIAM POWELL DAY,	Brookside
DAVID ANDREW GEARHART,	Wighton
ALBERT FRED HERBINE,	Berwick
ROY NEVIN HILL,	Leechburg
CAMERON BURNSIDES HOLTER,	Howard
ALBERT SIGMUND LAEHDER,	Manasquan, N. J.
ALLEN EUGENE LEES,	Juniata
WILLIAM LLOYD MESSINGER,	Watsonstown
CHARLES WARREN MILLER,	Fleetwood
CORBETT GEORGE MILLER,	Lewisburg
EMERSON RALPH MILLER,	Ephrata
JAMES FRED MOORE,	Milton
CLIFFORD CLARK PINDER,	Johnstown
WILLIAM JENNINGS RINEBOLD,	Athens
JOHN FREDERICK SCHNEIDER,	Vineland, N. J.
BROMLEY REYNOLDS SMITH,	Lewisburg
WILLIAM FRANKLIN STECK,	Muncy

NAME.

BURTON HODGE SWEITZER,
WILLIAM MCKINLEY TONKAY,
JOHN BEEBER VANDERBILT,
ALLEN FRYMIRE WILLSON,
CORBIN WAYLAND WYANT,

RESIDENCE.

Plymouth
Greensburg
Williamsport
Williamsport
Kittanning

THE FRESHMAN CLASS.
CLASS OF 1921.

NAME.	RESIDENCE.
SARAH ELIZABETH ADAMS,	Coatesville
ROBERT WALTER ANGSTADT,	Lewisburg
MARY EDNA BAKER,	Lewisburg
HELEN SCHEIDY BECK,	Catasauqua
MARY ELIZABETH BEIRNE,	Wilkes-Barre
MATILDA ELIZA BELL,	New Millport
LUKE REYNOLDS BENDER,	Milton
SARAH MUSSER BERNHARDT,	Lewisburg
FEARNS EDMUND BITLER,	Muncy
CHARLES HILAIRE BITNER,	Milton
JAMES MILTON BORTZ,	Vandergrift
ALBERT WILLIAM BOYER,	Sunbury
CHARLES FRANKLIN BRANDT,	Sharon
GEORGE HOBART BROWN,	Morristown, N. J.
FANNIE WAGNER BURR,	Morristown, N. J.
HARRY ROSCOE BURROWS,	Picture Rocks
MARY LINCOLN CAREY,	East Downingtown
JOHN PACKER HAAS CARTER,	Sunbury
CLARA MARGARET CASNER,	Newberry
MARIE BERTHA CHLEBUS,	Pittsburgh
VICTOR GORDON CLARE,	Millville, N. J.
BARBARA HELEN COE,	Clymer
MARGUERITE NANCY COE,	Clymer
LYDIA COENE,	Paterson, N. J.
JENNIE MARY EMELINE COLLINS,	Sunbury
EDWIN BAILEY COOKE,	Wilkes-Barre
DOROTHY LUANA DAVIS,	Berwick
ELIZABETH LILLIAN DAVIS,	Nanticoke
HERBERT NATHAN DERR,	Milton
EMILY KATHRYN DEVINE,	Dunmore
LOTTIE NOBEENE DIETZ,	Danville
ESTHER VIRGINIA DODSON,	Westmount, N. J.
JOHN LATHEIGN DORRIS,	Nanticoke
THOMAS RAYMOND DORRIS,	Nanticoke
RALPH MILLER DYER,	Elysburg
HOMER TITUS EATON,	Erie
WALTER PIERSON EDWARDS,	Gouldsboro
HAROLD SPENCER EISLEY,	Lewisburg

NAME.	RESIDENCE.
AILEEN LUCILLE EVANS,	Greenville
DAVID HOBART EVANS,	Wilkes-Barre
JAMES ALFORD EVANS,	Plymouth
ANNA GLADYS FAIRCHILD,	Milton
DALE DUBS FARLEY,	Lewisburg
HATTIE COLE FERTIG,	Lewisburg
LAURA MARIE FILER,	Kensington, Md.
JOHN CRAIG FINNIGAN,	Belford, N. J.
EMMALENE FISHER,	Lewisburg
JOHN WILLIAM FLYNN,	Laporte
GRACE RAU FOLLMER,	Milton
HELEN BERGSTRESSER FOLLMER,	Milton
EMMA MAGDALENA FUHRER,	Scranton
KATHARINE MAY FULFORD,	Morristown, N. J.
ALBERT GOHO,	Lewisburg
HELEN GRACE GOOD,	Williamsport
ELIZABETH DUNBAR GROFF,	Montgomery
MARY ARBUTUS HARNER,	Elkton, Va.
ARTHUR EARL HARRIS,	New Castle
RALPH FRANKLIN HARTZ,	Reading
ROBERT PAUL HARTZ,	Reading
ALAN RICHARD HAUS,	Reading
RICHARD ROY HECKART,	Sunbury
EDWARD FIELDING HEIM,	Lewisburg
HENRY LEROY HELLER,	Reading
ANDREW LUKE HENRY,	Fairmount, W. Va.
GRANT OSWALD HERB,	Snydertown
FLORENCE MAE HESLET,	Milton
JAMES LEO HESS,	Lewisburg
RAYMOND GERARD HIDLAY,	Bloomsburg
MARGARET STELLA HOLSING,	Canonsburg
EDWIN WEIMER HULL,	Montgomery
ISAAC HUMPHREY,	Nanticoke
JAMES BIGGER HUTCHISON,	Scottdale
LUTHER PAUL ILGEN,	Mifflinburg
JOSEPH FRANCIS INGHAM,	Laporte
CARMAULT BENJAMIN JACKSON,	Woodstown, N. J.
RUSSELL FOULKE KELLER,	Quakertown
HARRY WILLIAM KENNEDY,	Milton
SARAH ANNA KERSTETTER,	Lewisburg
CLARENCE HOFFMAN KEY,	Millville, N. J.
ALDEN PARK KING,	Succasunna, N. J.

NAME.	RESIDENCE.
DENZIL KING,	Muncy
OLIVER LINTON KING,	Quakertown
RUTH EDITH KLECHNER,	Mifflinburg
GEORGE HARRY KLINGELHAFFER,	Philadelphia
ELWIN LARUE KOHLER,	Hughesville
EDWARD CLINTON KOLB,	Westmont, N. J.
JOSEPH KOSTOS,	Mt. Carmel
STANFORD LARUE KUNKLE,	Newberry
HILDING ALFRED LARSON,	Port Allegany
MARTHA LEISER,	Lewisburg
DOROTHY AMELIA LENT,	Oxford
WILLIAM WALLACE LEWIS,	Trevorton
DELLA SARAH LONABAUGH,	Pittsburgh
MARGUERITE THERESA LOTTE,	Paterson, N. J.
HERMAN SCHULTZBURG LUNK,	Rochester
FREDA CROWL MACKERETH,	Elkview
HANNAH MADISON,	Muncy
MURVINGTON HUNTER MALAUN,	Carbondale
EDNA MARTIN,	Lewisburg
WINFIELD SCOTT MASTERS,	Taylor
FLOYD KLINE MAYHOOD,	Blairsville
DOROTHY CONRAD MEIXELL,	Lewisburg
MARTIN KELLER MOHLER,	Ephrata
CLARENCE BYRON MOORE,	Reedsville
HOWARD HARRISON MOORE,	Reynoldsville
RUTH LILLIAN MOUNT,	Millington, N. J.
EFFIE MUIR,	Morristown, N. J.
HAROLD CLYDE MCCULLOUGH,	Washington
JOHN DAVID MCGANN,	Harrisburg
RUTH EDNA MCGILL,	Franklinville, N. Y.
GEORGE BESOLD NESLINE,	Sunbury
WILLIAM EDGAR NICHOLS,	Williamsport
HAROLD THOMAS NOGLE,	Lewisburg
HAROLD PHILLIPS OAKLEY,	Milford, N. Y.
ELLA BOLTON OSBOURN,	Lewisburg
ALEXANDER MONROE PETER,	Slatington
MEREDITH WILLIAM PETTIT,	Manasquan, N. J.
GEORGE VINCENT PRESTON,	Manasquan, N. J.
ETHEL LLOYD PRIOR,	Williamsport
RACHEL MARY REED,	Westfield, N. J.
CHARLES FREDERICK RIECKENBERG,	Great Neck, L. I.
THOMAS DAVID RITTER,	Lewisburg

NAME.	RESIDENCE.
MARY EDNA ROBINSON,	Lewisburg
ALEXANDER REXFORD ROLLER,	Picture Rocks
LUCILLE BERTHA RUTHERFORD,	Laurelton
MYRON BENJAMIN SAVIDGE,	Turbotville
GEORGE JAY BEVIER SCHUYLER,	Williamsport
HOWARD CARL SHELLY,	Hazleton
HAROLD LAWSON SHIMER,	Milton
CHARLOTTE WALTON SIPLEY,	Lewisburg
CHELTON WINTHORF SMITH,	Milton
DONALD SMITH,	Flanders, N. J.
ROSWELL OSCAR BARNETT SMITH,	Morristown, N. J.
VERNA LOIS SMITH,	Mahanoy City
MARIE DOROTHY SPANGLER,	Milton
MARJORIE ELIZABETH SPROUT,	Picture Rocks
IGNAS MARTIN STADULES, JR.,	Plymouth
ANNA LEILA STERLING,	Meshoppen
GERTRUDE STEVENS,	Lansdowne
DAVID HADDEN STEWARDSON,	Jersey City, N. J.
SELAH WOOD SUTTON,	Morristown, N. J.
FRANK THOMPSON TAYLOR,	Trenton, N. J.
EVA GERTRUDE THAYER,	Bradford
WILLIAM JOHN THOMAS,	Nesquehoning
JESSE BERT THOMPSON,	Williamsport
LULU MAY TOMPKINS,	Morristown, N. J.
FRANKLIN SCHREYER TOWNSEND,	Milton
ELLA LARUE UNGER,	Shamokin
CHARLOTTE VOLKMAR,	Williamsport
ELIZABETH VANSCHOYCE WEIDNER,	Vineland, N. J.
VERA ISABEL WELSH,	Emporium
CHARLES RUSSELL WERNER,	Reading
RALPH EMERSON WILKINSON,	Trevorton
THOMAS STUART WILLIAMS,	Wilkes-Barre
WILLIAM CHARLES ARTHUR WILLMAN,	Mt. Carmel
JOHN LEE YARNALL, JR.,	Lewisburg
CHARLES ADAM ZELLER, JR.,	Dalton
ALVIN ADAMS ZWEIER,	Quakertown

Freshmen, 158.

NON-MATRICULATES.

NAME.	RESIDENCE.
HILDA DIXON COATES,	Plymouth
*WILLARD HENRY COLLINS,	Lewisburg
KIMBER LEON DYER,	Lewisburg
SAMUEL LIGHTMAN,	Sunbury
WILLIAM MEREDITH LYBARGER,	Mifflinburg
HAROLD MAYNE LUND,	Landenburg
*FELICIANA MANRIQUEZ,	Mexico City, Mexico
DORRIS WILSON MARSHALL,	Portville, N. Y.
FRANKLIN KING NOLL,	Montgomery
FRANK THURSTON RANSBURG,	Harrisburg
ROY WILLIAM SAUERS,	Mifflinburg
WILLARD RAY SAUERS,	Mifflinburg
BERNHARDT RANSOM SEEMANN,	Oakmont
EMERSON AQUILLA THOMAS,	Williamsport
LAWRENCE ALEXANDER VREDENBURG,	Muncy
STEPHEN JAMES WARGO,	Strong
NEVIN AMOS WEISNER,	Glassboro, N. J.
CLIFFORD ELLSWORTH WENTZ,	Jersey Shore

Non-Matriculates, 18.

NON-MATRICULATES IN MILITARY SERVICE.

NAME.	RESIDENCE.
LESTER KELLEY ADE,	Williamsport
CLARENCE JOSEPH ALLEN,	Dunmore
DENZIL MERRITT CAMPBELL,	Brookville
WALTER ASHLEY BOYLES,	Steelton
ARNOLD RUDOLPH KERTH,	Philadelphia
*GROVER RUSSELL SHORT,	Lebanon

SUMMARY.

Graduate Students	42
The Senior Class	87
The Junior Class	83
The Sophomore Class	136
The Freshman Class	158
Non-Matriculates	18
Total in the College of Liberal Arts.....	524

In Military Service, 117.

* Entered January 3, 1918.

THE SCHOOL OF MUSIC

FACULTY.

PAUL GEORGE STOLZ, A.M., DIRECTOR,
SCIENCE OF MUSIC, VOICE.

(Bucknell School of Music, Dr. Elysée Aviragnet, A.M.; Dr. Hugh Schussler, New York; Emrich and Soehnlín, Berlin, Germany.)

CHARLOTTE GUIONU ARMSTRONG,
VIOLIN, HISTORY OF MUSIC.

(Wyoming Seminary; New England Conservatory; Musin, New York City.)

ETTA ALTHEA BROWN,
VOICE, SIGHT SINGING.

(Bucknell School of Music; Oscar Saenger, New York City; E. M. Young, New England Conservatory.)

MADAME GUISEPPINA DE SYLVA SCHOEN,
VOICE, STAGE DEPARTMENT.

(Macovaldi, Milano Conservatory; Broggio, Bologna Conservatory.)

ALVIN JACOB ADAMS.
PIPE ORGAN, HARMONY.

(Bucknell School of Music; Louis A. Brookes, Mus.D., Oxon., Wheeling, W. Va.; Clarence E. Day, New York City.)

ANNA MARTHA PINES,
SUPERVISOR'S COURSE.

(Bucknell School of Music; Combs's Conservatory, Philadelphia; Cornell University, Ithaca, N. Y.)

DAVID MOYER BERLINO,
PIANO, ADVANCED HARMONY.

(Alberto Jonas, Berlin; Ernst von Dohnanyi, Berlin.)

JESSIE LOUISE COOPER,
PIANO, BEGINNERS' HARMONY.

(Bucknell School of Music; Prof. Cruthers, Philadelphia; Prof. Briggs, New England Conservatory.)

NAMES OF STUDENTS

GRADUATE STUDENTS

NAME.	COURSE.	RESIDENCE.
NELLE WOLFE AUMILLER,		Lewisburg
	<i>Piano.</i>	
ETHEL CLUSH BRIGHT,		Sunbury
	<i>Violin.</i>	
ELIZABETH LOUISE HAHN,		Meshoppen
	<i>Voice.</i>	
MARGUERITE MARTHA STUCK,		Milton
	<i>Piano.</i>	
THEO EMMA STUCK,		Mifflinburg
	<i>Voice.</i>	

FOURTH YEAR.

HARRY ANDREWS,		Milton
	<i>Voice.</i>	
MARY ROTHINA ARBOGAST,		Lewisburg
	<i>Voice, Theory.</i>	
FLORENCE MAY BUFFINGTON,		Shamokin
	<i>Voice.</i>	
FLORENCE EDNA CRABB,		Winfield
	<i>Piano, Theory.</i>	
HAZEL LILLIAN HAGERMAN,		Malaga, N. J.
	<i>Supervisor, Piano, Organ, Theory.</i>	
HELEN WITHERSPOON HAMOR,		Milton
	<i>Organ, Theory.</i>	
BEULAH MAE HUMMEL,		Lewisburg
	<i>Supervisor, Voice, Theory.</i>	
MARIE AILEEN LARSON,		Kane
	<i>Voice, Theory.</i>	
LEAH ELIZABETH LINDIG,		Lewisburg
	<i>Piano, Theory.</i>	
EMILY LEVIS MACKEY,		Oxford
	<i>Supervisor, Piano, Theory.</i>	
ROSE MAHER,		Port Allegany
	<i>Supervisor, Voice, Theory.</i>	

NAME.	COURSE.	RESIDENCE.
FLORINE MICHAEL,	<i>Voice, Theory.</i>	Laceyville
EMMA MARY MOYER,	<i>Supervisor, Voice, Theory.</i>	Rebersburg
EMILY GROFF PIATT,	<i>Piano, Theory.</i>	Montgomery
KATHERINE PAULINE REED,	<i>Supervisor, Voice, Theory.</i>	Sunbury
RACHAEL MARY REED,	<i>Organ, Theory.</i>	Westfield, N. J.
ETHEL RUTH REMALY,	<i>Piano, Theory.</i>	Mazeppa
HELEN SHEPHARD RUGGLES,	<i>Supervisor, Voice, Theory.</i>	Athens
HAZEL MAE SMITH,	<i>Voice.</i>	Milton
ELLEN MAE SMITH,	<i>Piano, Theory.</i>	Lewisburg
EMMA ALICE STRINE,	<i>Organ, Piano, Theory.</i>	Milton.
OLIVE MARGARET THOMPSON,	<i>Voice, Theory.</i>	Mifflinburg
MADALINE WILHELM,	<i>Voice.</i>	Milton

THIRD YEAR.

MARGARET ELIZABETH ALLEN,	<i>Voice.</i>	Watsonstown
ANNE ELY BERTOLET,	<i>Piano.</i>	Oley
DEWITT KIEFFER BOTTS,	<i>Piano.</i>	Milton
MARY ELIZABETH BOYER,	<i>Piano, Theory.</i>	Sunbury
ELSIE BERYL BUCKLEY,	<i>Supervisor, Piano, Organ, Theory.</i>	Port Allegany
ELIZABETH BIRD CHAMPION,	<i>Piano.</i>	Montoursville
ALDEN EUGENE DAVIS,	<i>Voice, Piano.</i>	Dickson City
ERROL DERBY,	<i>Violin.</i>	Scranton

NAME.	COURSE.	RESIDENCE.
RAYMOND FASOLD,	<i>Voice.</i>	Sunbury
MARY ELLEN HARRIS,	<i>Voice.</i>	Lewisburg
RALPH FRANKLIN HARTZ,	<i>Voice.</i>	Reading
THOMAS JACOB HEIM,	<i>Voice.</i>	Williamsport
HELEN ROBERTA HOFFA,	<i>Piano.</i>	Lewisburg
NERISSA DAGMAR JAMES,	<i>Piano.</i>	New York City
RAYMOND PLANK LEWIS,	<i>Voice, Violin.</i>	Lewisburg
IRMA VIAL MALICK,	<i>Piano, Voice, Theory.</i>	Snydertown
FLORENCE MALLORY,	<i>Voice.</i>	Milton
ELLEN ELIZABETH PETERSON,	<i>Supervisor, Piano, Theory.</i>	Ralston
MARIAN RIESS,	<i>Piano, Theory.</i>	Mercedes, Texas
MARY PAULINE SCHENCK,	<i>Voice.</i>	Morristown, N. J.
AMY PEARL SILL,	<i>Supervisor, Piano, Theory.</i>	Franklinville, N. Y.
SARAH LILLIAN STROH,	<i>Piano.</i>	Lewisburg
RUSSELL RAY STOUT,	<i>Voice.</i>	Cedarville, W. Va.
DOROTHY MARIE THOMPSON,	<i>Organ.</i>	Woodlynne, N. J.
MARY DOROTHEA TOOLEY,	<i>Voice.</i>	Milton
GEORGE ALBERT TURNER,	<i>Organ, Piano, Theory.</i>	Carbondale

SECOND YEAR.

LEO BALISTRERO,	<i>Voice.</i>	Milton
LAMBERT TEUFEL BOTTS,	<i>Voice.</i>	Milton

NAME.	COURSE.	RESIDENCE.
MARY EVELYN BRIGHT,		Philadelphia
	<i>Voice.</i>	
HOBART BROWN,		Morristown, N. J.
	<i>Voice.</i>	
ELTHERA GLENN CORSON,		Bridgeton, N. J.
	<i>Voice.</i>	
ETHYLE DOUGLAS CULBERT,		Elizabeth
	<i>Voice.</i>	
CHARLES EDWARD EVANS,		Pottsville
	<i>Organ, Piano, Voice, Theory.</i>	
THELMA FASOLD,		Sunbury
	<i>Piano.</i>	
THERON FASOLD,		Sunbury
	<i>Piano.</i>	
HELEN GERTRUDE FISHER,		Sunbury
	<i>Piano, Theory.</i>	
HERBERT CLAIR GREENLAND,		Pittston
	<i>Voice.</i>	
ARTHUR EARL HARRIS,		New Castle
	<i>Voice.</i>	
MADONNA HARRIS,		Laceyville
	<i>Voice.</i>	
ROBERT HARTZ,		Reading
	<i>Violin.</i>	
AGNES HOFFMAN,		Chadds Ford
	<i>Voice.</i>	
ELLA CORINNE JONES,		Montrose
	<i>Piano.</i>	
FRANKLIN DE LA VERGNE JONES,		Nanticoke
	<i>Voice.</i>	
MABEL ERMA JONES,		Throop
	<i>Piano.</i>	
BLANCHE MARTIN,		Milton
	<i>Piano.</i>	
DOROTHY INEZ MCCLINTIC,		New York City
	<i>Piano.</i>	
MALCOLM MUSSER,		Lewisburg
	<i>Voice.</i>	
LESLIE NEYHART,		Milton
	<i>Voice.</i>	
HELEN NUTT,		Penn Yan, N. Y.
	<i>Voice.</i>	

NAME.	COURSE.	RESIDENCE.
GLENN EDWIN OTT,		Orbisonia
	<i>Piano.</i>	
LAYAH REECE,		Milton
	<i>Violin.</i>	
LOUISE ROBINSON,		Milton
	<i>Violin.</i>	
BERTHA ELIZABETH ROUSH,		Winfield
	<i>Piano, Theory.</i>	
LOIS MYRTELLA SMITH,		Milton
	<i>Piano.</i>	
DOROTHY VILLINGER,		Williamsport
	<i>Piano.</i>	
FIRST YEAR.		
PAUL JAMES BROOKS,		Milton
	<i>Piano.</i>	
BARBARA HELEN COE,		Clymen
	<i>Piano.</i>	
MARGUERITE NANCY COE,		Clymen
	<i>Piano.</i>	
LYDIA COENE,		Paterson, N. J.
	<i>Violin.</i>	
THELMA CORRY,		Milton
	<i>Voice.</i>	
JOHN ANTHONY DAVIS,		Milton
	<i>Violin.</i>	
HOMER TITUS EATON,		Erie
	<i>Voice.</i>	
GRACE RAU FOLLMER,		Milton
	<i>Voice.</i>	
HELLEN BERGSTRESSER FOLLMER,		Milton
	<i>Voice.</i>	
EDITH FOWLER,		Watsonstown
	<i>Voice.</i>	
MARGARET FOWLER,		Watsonstown
	<i>Piano.</i>	
MADGE ODEAN HEIMBACH,		Lewisburg
	<i>Piano.</i>	
HILDA IRENE HERALD,		Montgomery
	<i>Piano, Voice.</i>	
LOUISA HOWELLS,		Carbondale
	<i>Piano.</i>	

NAME.	COURSE.	RESIDENCE.
MILDRED ISABELLE LESHER,	<i>Piano, Voice, Theory.</i>	Lewisburg
EDITH MARIE LARSON,	<i>Piano.</i>	New Haven, Conn.
JOSEPHINE HARRIETT MORGAN,	<i>Violin.</i>	Sunbury
RACHEL MILLER,	<i>Voice.</i>	Milton
FRANCES ZELLA PARDOE,	<i>Piano.</i>	Lewisburg
MARY ELIZABETH PAULES,	<i>Voice.</i>	Danville
DOROTHY PURSELL,	<i>Piano.</i>	Lewisburg
HAZEL RUHL,	<i>Piano, Voice.</i>	Lewisburg
NELLIE SHIVELY,	<i>Piano.</i>	Millmont
ERMA ELIZABETH SMITH,	<i>Piano.</i>	Milton
JEAN SMITH,	<i>Voice.</i>	Sunbury
MARGARET THOMAS SMITH,	<i>Voice.</i>	Lansford
MARIE DOROTHY SPANGLER,	<i>Voice.</i>	Milton
PAUL HENRY STOLZ,	<i>Organ.</i>	Philadelphia
EVA GERTRUDE THAYER,	<i>Piano.</i>	Bradford.
MARGARET HELEN TRUMP,	<i>Piano.</i>	Derry
GERTRUDE ESTELLE WERTS,	<i>Voice.</i>	Pittston
WILLIAM C. A. WILLMAN,	<i>Voice.</i>	Mt. Carmel
FRANCES WOHLHEITER,	<i>Violin.</i>	Sunbury
DORIS ANNA ZEIGLER,	<i>Voice.</i>	West Milton
ANNABELL DORA ZIMMERMAN,	<i>Piano.</i>	Lewisburg

SUMMARY.

Piano	53
Pipe Organ	7
Violin	10
Voice	57
Supervisor's Course	14
History of Music	12
Beginners' Harmony	17
Advanced Harmony	11
Sight Singing	20
Musical Appreciation	12
Total Number of Lessons.....	360
Pupils	118

GRADUATES, CLASS OF 1917.

NAME.	COURSE.	RESIDENCE.
SAMUEL ABRAMS,	<i>Piano, Theory.</i>	Milton
DAVID NATHANIEL BOSWELL,	<i>Voice, Theory.</i>	Lewisburg
JESSIE LOUISE COOPER,	<i>Piano, Organ, Theory.</i>	Scranton
VELMA MILLER DAVIS,	<i>Piano, Organ, Theory.</i>	Kane
EUGENIA DUKE,	<i>Piano, Theory.</i>	Renovo
THOMAS AUSTIN ESHELMAN,	<i>Violin, Theory.</i>	Franklin
ETHEL MARIE GRANT,	<i>Piano, Theory.</i>	Trevorton
CARRIE MARY JANE GRUGAN, A.B.,	<i>Voice, Theory.</i>	West Milton
ELIZABETH LOUISE HAHN,	<i>Supervisor, Voice, Theory.</i>	Meshoppen
DON HARPAM,	<i>Violin, Theory.</i>	Milton
MILDRED ELIZABETH JORDAN,	<i>Supervisor, Piano.</i>	Athens
CONSTANTINO NEGRO,	<i>Violin, Theory.</i>	Philadelphia

NAME.	COURSE.	RESIDENCE.
JESSIE IRENE POTTS,	<i>Supervisor, Theory.</i>	Greensburg
STEPHEN FRALEY PUFF,	<i>Voice, Theory.</i>	Philadelphia
MARGARET ISHMAN SIBLE,	<i>Supervisor, Piano, Theory.</i>	Mountaindale
HAZEL TULE,	<i>Piano, Theory.</i>	Milton
SARA EVANS THOMPSON, A.B.,	<i>Voice, Theory.</i>	Sewell, N. J.
FORREST GLENN WALTER,	<i>Theory.</i>	Potts Grove
GLADES EDNA WILLS,	<i>Supervisor, Voice, Theory.</i>	Renovo
HELEN WINNER,	<i>Supervisor, Theory.</i>	Pittsburgh
MAUDE IRENE WITHERSON,	<i>Supervisor, Piano, Theory.</i>	

HISTORICAL.

Music was first taught at Bucknell University in 1853 by Melville Malcolm under the supervision of the Seminary. Various teachers had charge until 1858, when Monsieur Theodore P. Held, a French artist, took charge with one assistant, and in 1864 he was given a second assistant. In 1865 Monsieur Held's position became vacant, but he again resumed his work in 1866. In 1867 Alexander M. Loos was made Professor of Music. In 1869 Hermann F. Eberhardt took up the duties of Professor of Music and by 1870 there were sixty students enrolled in the Music Department. In 1871 a vocal teacher was added to the music faculty. In 1888 Professor Elysée Aviragnet, M.A., took charge of the Music Department. In 1892 Professor Aviragnet received the degree of Doctor of Music, after which the Music Department was known as the Bucknell University School of Music, one of the distinct schools of the University, which are one corporation and have one President, who has general charge. Since 1903 Paul Stolz became actively associated with Dr. Aviragnet and his work in the School of Music, became his assistant, later Assistant Director, and at Dr. Aviragnet's death in 1908, his successor as Director of the School of Music. In 1917 the music faculty consisted of eight teachers, three in piano, three in voice, one in violin, and one in pipe organ with an attendance of one hundred and eighteen pupils.

COURSES OF STUDY

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

COURSE IN PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *Études* by Biehl, Lemoine, LeCouppey, Bertina and Czerny; introductory technical work; Sonatina, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46, and 47; Loeschorn, Op. 66; Czerny, Op. 299; Bernes, Op. 61; Easier Mozart, Haydn, Beethoven, Sonatas; Little Preludes by Bach; Bach Inventions, Scales, Arpeggios, and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin, and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 *Studies*; Clementi *Gradus ad Parnassum*; Moscheles, Op. 70; Bach Suites, Handel Suites, Scarlatti pieces, Beethoven Sonatas; introductory Chopin work; compositions by Grieg, Godard, MacDowell, Moszkowski, and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerto; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Études; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms, and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements, and purposes of each student.

COURSE IN PIPE ORGAN.

The study of pipe organ is generally pursued by music students having at least Junior standing in piano. The Course is designed to provide a thorough education as choirmaster and organist, and provides for a training in all that pertains to intelligent performance of church music, voluntaries, and the art of accompaniment; also a systematic drill in technics, registration, and improvisation.

A new pipe organ for practice was installed during the summer of 1916.

FIRST YEAR.

Stainer's Organ Method. Schneider's Organ Studies. Easy Hymn Tunes. Registration. Sight Reading. Easy pieces by Batiste, Flagler, Lemaigre, etc.

SECOND YEAR.

Dudley Buck's Short Preludes and Fugues, and Pedal Phrasing. Bach Chorales. Difficult hymn tunes. Organ solos of various styles by Rheinberg, DuBois, etc.

THIRD YEAR.

Sonatas by Merkel, Bach, and Mendelssohn. Preludes, Toccatas, Fugues. Quartet and chorus accompaniment. Selected solos by Guilmant, Malling, etc.

FOURTH YEAR.

Each Senior Must Register for Full Course.

Sonatas by Guilmant, Rebuke. Symphonies by Widor. Bach's Advanced Works. Chanting and solo accompaniment. Improvisation. Selected solos for concert use, by Franck, Widor, Lemare, Hollins, etc. Voice (three terms).

It is very essential that an organist and choirmaster should understand the various voices he is to train, and for this reason we consider the voice requirement indispensable in the Organ Course.

A minor Course in Organ Construction will be required of graduate students in addition to the following theoretical courses:

Solfeggio and Dictation (three terms).

Harmony (six terms).

Harmonic Analysis (two terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

In order to give organ students a good presence in public appearance, all organ students will be required to appear in public and semi-public recitals once each month.

COURSE IN VIOLIN.

In the Violin Course, special attention is given to correct bowing, ear training and interpretation, a thorough acquisition, technically, and the study of a repertoire; with a few additions or changes to suit the individual requirements of the student, the general outline of the Course is as follows:

FIRST YEAR.

Methods of Schubert, Wohlfart, Spohr, etc. Scales and bowing exercises to promote beauty of intonation. Easy pieces.

SECOND YEAR.

Schools by De Beriot, Mazas, and Kayser. First ten studies of Kreutzer.

THIRD YEAR.

Concertos by Viotti. Sonatas by Gade, Grieg, and others. Études by Kreutzer, Fiorillo, and Casorti.

FOURTH YEAR.

Rode Caprices and Concertos. Mendelssohn and Mozart Concertos. Solos by the best composers for the violin are used throughout the Course to develop style and phrasing.

Opportunity is given for ensemble playing to those sufficiently advanced. One year of pianoforte study is required.

Theoretical courses required for graduation:

Solfeggio and Dictation (three terms).

Harmony and Analysis (six terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

COURSE IN VIOLONCELLO.

FIRST YEAR.

Technical exercises. Major scales in two octaves. "Method Practique," by S. Lee. Studies by Dotzauer. Easy pieces.

SECOND YEAR.

Technical exercises by Cossmann. Scales in three and four octaves. Studies by Lee and Franchomme. Concertinos and pieces by Romberg.

THIRD YEAR.

Technical exercises by Fitzhagen. Advanced studies by Grutzmacher. Concertos.

FOURTH YEAR.

Technical exercises by Klengel and Becker. Advanced studies. Sonatas by Bach.

Theoretical courses. See Violin Course.

COURSE IN CONTRABASS.

FIRST YEAR.

Warnecke's Method of Playing. Scales and finger exercises. Études.

SECOND YEAR.

Vorzuegliche Uebungen, Hause's. Études. Overtures. Symphonies.

THIRD YEAR.

Warnecke's Method. Advanced Études. Beethoven Symphonies.

FOURTH YEAR.

Warnecke's Method. Part 2. Wagner Operas. Solos by Sturm and Laska.

Theoretical courses. See Violin Course.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies by Campagnoli.

VOICE CULTURE.

Careful instruction is given in the use of the voice and the correct manner in producing purity of tone—the equalization of tone throughout the whole compass of the voice, and gain for it flexibility, fullness and durability.

TONE WORK. Physiology, breath control, voice placing.

ENUNCIATION. Attack, release, vibration, legato. (Vowels, diphthongs, and consonants.)

SIGHT SINGING. Staff notation, rhythm, ear training, harmony.

REPERTOIRE. Interpretation and classification.

SONG, ORATORIO, AND OPERA COACHING.

Pupils desiring to acquire the true rendition in oratorio solo singing, as exemplified in the interpretation of the great singers and conductors, can secure the necessary knowledge and thus equip themselves for public performances.

Ensemble Singing, Duets, Trios, Quartets, and Choruses from Operas and Oratorios.

Studies from the works of old masters such as Palestrina, Orlando di Lasso, Gabrieli, Leo Hassler, etc.

Production of various opera scenes.

FIRST YEAR.

Breath Control. First Vocalises of Concone. Diction. Slow Easy Songs. Solfeggios.

SECOND YEAR.

Vocalises by Concone, Marchesi, Lamperti, and others. Diction. More advanced English songs. Simple Recitative. Simple Arias. Solfeggios. Piano (one lesson weekly). Chorus. Advanced Vocalises, Song Interpretations. Velocity.

THIRD YEAR.

Advanced Vocalises. Song Interpretation. Velocity. Coloratura singing begun. Difficult Recitatives. Elaborate Arias. Solfeggios Advanced. Chorus.

FOURTH YEAR.

Complete Oratorio Rôles. Complete Opera Rôles. Preparation of Concert Programs. Chorus.

Theoretical courses required for graduation. See Theory for Piano Course.

TEACHERS' COURSE IN PUBLIC SCHOOL MUSIC.

This Course provides in a systematic manner the best teaching methods, together with a thorough drill in sight reading, ear training and harmony; also gives actual practice in conducting the

classes. In most of the public schools the regular grade teachers instruct the pupils under the supervision of a supervisor trained for the work. The purpose of this department is training for such supervision; by instructing pupils how to teach others to teach sight singing.

Outline of music used in the four-year Supervisor's Course:

FIRST YEAR.

SIGHT SINGING. This Course is elementary. The student must possess a singing voice of acceptable quality. Proficiency in sight singing is of great advantage to the student entering the Supervisor's Course.

To complete this course the student must use Latin syllables to sing at sight individually music suitable for the first four years in the public schools.

SECOND YEAR.

SIGHT SINGING. The student is required to sing at sight with and without syllables, music suitable for the first seven years in the public schools.

THIRD YEAR.

SIGHT SINGING. The student is required to sing at sight without accompaniment, reading words and music simultaneously, the music used in the upper grades of the public schools and in the high school.

FIRST YEAR.

DICTATION. (Sense of hearing based on the study of tone and rhythm.) The student gains the power to think tones and to sense rhythms and learns to recognize and write simple melodic phrases in all keys.

Oral and written dictation work of the first four years in public school music, and singing from memory all sequential studies is required.

SECOND YEAR.

DICTATION. Each student is required to complete the oral and written dictation, including all sequential studies.

THIRD YEAR.

DICTATION. This Course completes melodic dictation. Aural recognition of intervals and of chords in their fundamental and in their inverted positions in both major and minor tonalities is required in harmonic dictation.

FIRST AND SECOND YEARS.

MATERIALS AND METHODS. The study and demonstration of materials and methods for kindergarten and the first four grades in public school music is considered. Selection, presentation, interpretation of rote songs for the lower grades, and the different tonal and rhythmic problems are taken up.

THIRD YEAR.

MATERIALS AND METHODS. This Course is devoted to the teaching and supervising of music from fifth to eighth grades, inclusive.

FOURTH YEAR.

MATERIALS AND METHODS. The topics for consideration are: School chorus, glee clubs, grading and classification.

ORCHESTRAL TECHNIQUE.

PRACTICE TEACHING.

Theoretical courses required for graduation:

Harmony and Analysis (six terms).

Counterpoint and Fugue (three terms).

History and Theory (three terms).

HARMONY.

The fundamental principles of the theory of music are embodied in the study of harmony which treats of the different chords in their natural relations and combinations. The subdivisions of the subject are as follows: Intervals, or the measurement of the difference in pitch between one tone and another; triads, seventh, and ninth chords with their inversions and resolutions; chromatically altered chords; augmented chords; cadences; suspensions; passing and changing notes; organ point, modulation.

The work consists of written exercises on basses (both figured and unfigured) and the harmonization of given melodies in three and four voices. These are corrected by the instructor out of the classroom and subsequently discussed with the students individually. Many exercises are also worked out on the blackboard by the students.

Modern Harmony, by Foote and Spalding, is used as the basis of the instruction. The Treatises of Prout, of Chadwick, and of others are used as reference books, and supplementary illustrations and explanations are given in the classroom. The course is as follows:

FALL TERM.

Musical Notation, formation of Scales, both Major and Minor, intervals, triads, and chord connection. Simple part writing from given basses and sopranos; the chords of the seventh, with exercises harmonizing in open and close positions.

WINTER TERM.

Modulation. Transposition of various models in all keys. Harmonizing melodies which modulate.

SPRING TERM.

Chromatically altered chords, suspension, retardation, appoggiatura, passing tone, embellishment, pedal point.

No text book required the first term.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

SPECIAL ADVANTAGES.

Artists' Recitals. The opportunity of hearing good music rendered by artists of superior ability, is very essential in connection with the classroom instruction. All students of the School of Music are urged to attend these concerts as they are admitted without expense beyond the fee of two dollars, which is charged with the fall term bill. Since the concerts are educational in character, the fee charge should be regarded part of the tuition.

TUITION.

Tuition is charged for instruction in music, per annum, as follows:

	<i>Full</i>	<i>Half</i>	<i>Quarter</i>
	<i>Course.</i>	<i>Course.</i>	<i>Course.</i>
Vocal	\$82.00	\$47.00	\$27.00
Piano or Organ.....	82.00	47.00	27.00
Violin	82.00	47.00	27.00
Supervisor's Course in Public School Music	82.00	47.00	27.00
Harmony, in private lessons.....	82.00	47.00	27.00
Harmony in Class.....	27.00	....	....
Guitar and Mandolin, in Class.....	22.00	....	....
Use of Instruments for Practice Two Hours			
Daily, per term.....	4.00	....	....
Use of Pipe Organ for Practice One Hour			
Daily, per term.....	6.00	....	....

Special individual instruction in music, per lesson, \$2.00.

Full course implies two one-hour lessons per week, and theory.

Half course implies two half-hour lessons per week, and theory.

Quarter course implies one-half hour lesson per week, and theory.

No reduction is made except in case of protracted illness.

Instruction in the orchestra and in harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$260 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for

admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1917 this prize was given to Miss Jessie Cooper.

THE DIRECTOR'S PRIZE.

The Director of the School of Music offers an annual prize for excellence in the Science of Music. For 1917 this prize was awarded to Miss Maude Witherson.

VOICE PRIZE.

The Director, also, offers an annual prize for excellence in Voice. For 1917 this prize was awarded to Miss Elizabeth Louise Hahn.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

DEPARTMENT OF ELOCUTION

MISS EDITH SCHILLINGER.

MISS EUDORA REGINA HAMLER, A.B.,

The aim of this department is the correct study of voice and body for the effective expression of thought and emotion. Special attention is given to voice culture, articulation, gesture, and interpretative reading.

Semi-monthly recitals afford opportunity for platform work.

Particular attention is given to curing persons of stammering and other defects in speech.

The interpretation and the delivery of classics have a large place in the Course.

Special courses are offered to students who wish work along special lines of expression.

The Elocution Department offers a two-years' course leading to a certificate. All applicants for the regular course must have the equivalent of a high school education.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Department, takes place in Bucknell Hall on the second Saturday evening in the month of May.

THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1917 the prize was awarded to Ethel Hewitt.

COURSE IN HOME ECONOMICS

FACULTY.

ANNA ROBERTA CAREY, A.M.,
PSYCHOLOGY AND HYGIENE.

ROSE ELIZABETH RAINEY (Drexel Institute),
COOKING.

FLORENCE FOWLER,
COOKING AND SEWING.

NELSON FITHIAN DAVIS, SC.D.,
BIOLOGY AND BACTERIOLOGY.

WILLIAM HILLIARD SCHUYLER, CHEM.E.,
CHEMISTRY.

WILLIAM GUNDY OWENS, A.M.,
CHEMISTRY OF FOODS.

MARC LUTHER BALDWIN, A.M.,
FRENCH.

EDITH SCHILLINGER,
PHYSICAL EDUCATION.

Students in Home Economics are of College rank and their names are given in the catalog of College students.

The Course in Home Economics offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Home Economics.

Based on the principles of Chemistry, Physiology, and Hygiene, Biology, Bacteriology, and Psychology, the knowledge of cookery,

dietetics, home-sanitation, household economy, and home decoration, gained by the diligent student will meet the demands of successful practice in home, school, or institution. To prosecute the work of this Course effectively, the student must have the equivalent of the usual four-year High School Course.

This Course is intended to fit young women to teach Home Economics in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings and desserts of various kinds.

A complete laboratory has recently been fitted up at large expense for the use of the Home Economics Department, fully equipped for practical instruction in the several lines offered.

PSYCHOLOGY.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Comparative Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Child Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology are open as electives to College women.

PHYSIOLOGY.

The Course in Physiology, with special reference to Home Economics, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects

of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on.

CHEMISTRY.

Descriptive Chemistry is taught by text-book, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the student.

1. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4. Chemistry of Foods. Food analysis is practiced in the laboratory, six hours a week. Full College Course. Prerequisites, Courses 1, 2, and 3.

UNIVERSITY CALENDAR*

1918.

SPRING RECESS.

Second Term Ends,.....	Wednesday, March 20
Third Term Begins,.....	Wednesday, March 27
Sermon before the Christian Association,.....	Sunday, April 7
Contest in Elocution,.....	Saturday, May 4
Exhibition of the Junior Class, College,.....	Friday, May 10
Examinations,.....	Tuesday to Friday, June 14
Exhibition, School of Music,.....	Friday, June 14
Baccalaureate Sermon, ...	Sunday, June 16
Examinations for Admission to College,.....	Monday, June 17
Meeting of the Alumnæ,.....	Tuesday, June 18
Annual Meeting of the Trustees,.....	Tuesday, June 18
Annual Meeting of the Alumni,.....	Tuesday, June 18
Graduating Exercises of School of Music,.....	Tuesday, June 18
Oration before the Alumni,.....	Tuesday, June 18
ANNUAL COMMENCEMENT, the 68th.....	Wednesday, June 19
Summer School begins,.....	Monday, July 1
Fall Examinations for Admission to College,	
	Wednesday, September 18
First Term Begins,.....	Thursday, September 19
Election of Class Officers, 3 p. m.,.....	Friday, September 20
Reception by Christian Association,.....	Saturday, September 21
Matriculation, ...	Tuesday, November 26
First Term Ends,.....	Wednesday, December 18

1919.

Second Term Begins,.....	Thursday, January 2
Second Term Ends,.....	Wednesday, March 19
Third Term Begins,.....	Wednesday, March 26

* Subject to change with war conditions.

BUCKNELL UNIVERSITY

Attendance Upon the College for the Year Ending

	1890	1895	1900	1905	1910	1917
SENIORS	8	26	55	78	88	121
JUNIORS	14	37	52	78	97	157
SOPHOMORES	20	40	60	77	104	159
FRESHMEN	21	55	91	118	105	199
SPECIALS	8	5	15	25	17	32
GRADUATE		8	42	99	116	47
Totals	71	171	315	475	527	715

Alumni, 1851 to 1889, 430; 1890 to 1917, 1666.

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